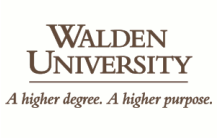

2015

Personality, Coping, and Burnout in Online Doctoral Psychology Students

Michelle Linn Grigsby
Walden University

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Michelle Linn Grigsby

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Linda J. Whinghter, Committee Chairperson, Psychology Faculty
Dr. Lisa M. Scharff, Committee Member, Psychology Faculty
Dr. Steven G. Little, University Reviewer, Psychology Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2015

Abstract

Personality, Coping, and Burnout in Online Doctoral Psychology Students

by

Michelle Linn Grigsby

MA, National University, 1997

BA, The University of North Texas, 1995

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

May 2015

Abstract

Completion times for doctoral psychology students are twice as long as those of other disciplines, and the attrition rate is over half of the matriculated students. Research indicates that (a) burnout plays an integral part in delayed completion and attrition for doctoral students and (b) personality and coping influence the development of burnout. In an effort to support prevention and intervention strategies, this study explored the gap in research regarding moderating effects of coping styles on the relationship between personality traits and burnout levels in online doctoral psychology students, as this population is growing at a significant rate and possesses additional risks for burnout due to physical isolation from faculty, academic peers, and support services. The NEO Five-Factor Inventory assessed the personality traits of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness; the Coping Inventory for Stressful Situations measured Task-, Emotion-, and Avoidant-Oriented coping styles; and the Maslach Burnout Inventory—Student Survey assessed the burnout dimensions of Exhaustion, Cynicism, and Efficacy. Results of multiple regression analysis indicated positive relationships between Neuroticism, Emotion-Oriented Coping, and Burnout, and negative relationships between Extraversion, Openness, Agreeableness, and Conscientiousness, Task-Oriented Coping, and Burnout. Avoidant-Oriented Coping was identified as a moderating variable on the predictive relationship between Conscientiousness and Professional Efficacy. This study contributes to social change by improving the understanding of burnout factors for online doctoral psychology students, which could enhance intervention strategies and improve timely program completion.

Personality, Coping, and Burnout in Online Doctoral Psychology Students

by

Michelle Linn Grigsby

MA, National University, 1997

BA, University of North Texas, 1995

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

May 2015

Dedication

I dedicate this project to my family—my parents, Gwendolyn and Donald; my children, Monique and Michael; and my sister and niece, René and Steffany—whose support has been invaluable to me during this journey. I am truly fortunate and ever grateful.

Acknowledgments

I would like to express my gratitude to my dissertation committee chairperson, Dr. Linda “Jeanie” Whinghter; my methodologist, Dr. Lisa Scharff; and my University Research Reviewer, Dr. Steven Little, for their guidance and encouragement in honing my research project. I would also like to thank my classmates who have served as cheerleaders, confidants, and sounding boards throughout the years. This has been especially true of Kellie Barr Santos and Audrey “Blessing” Okoro Rellias. Finally, I truly appreciate my cohorts who were willing to serve as participants in my research for taking the time to share their perspectives and experiences.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Introduction

Excessive exposure to prolonged stress causes an individual to experience a sustained "fight or flight" response (Benson et al., 1974). The ongoing nature of this increased activity in the sympathetic nervous system can lead to a cluster of symptoms known as *burnout* (Deary et al., 2003; Grant & Campbell, 2007; Jenaro et al., 2007; Linley & Joseph, 2007; Maslach & Leiter, 2008; Pines & Aronson, 1981; Radey & Figley, 2007; Schaufeli et al., 2002). Identifying characteristics include physical and mental exhaustion, depersonalization, demoralization, loss of motivation, and a decreased sense of personal accomplishment (Grant & Campbell, 2007; Jenaro et al., 2007; Maslach, 1986; Maslach & Jackson, 1985; Pines & Aronson, 1981). Left untreated, burnout can lead to poor quality of life for the individual and poor quality of work, whether this entails assisting others in care-giving professions or attention to tasks in other fields or studies (Anagnostopoulos & Niakas, 2010; Deary et al., 2003; Grant & Campbell, 2007; Jenaro et al., 2007; Kahill, 1988; Maslach & Leiter, 2008; Pines & Aronson, 1981; Radey & Figley, 2007; Raquepaw & Miller, 1989; Schaufeli et al., 2002). For psychologists, the risks of burnout are intensified by the context of their work (e.g., assisting others) as well as the content of their work (e.g., mental health concerns; Anagnostopoulos & Niakas, 2010; Grant & Campbell, 2007; Jenaro et al., 2007; Linley & Joseph, 2007). For the doctoral student specializing in the field of psychology, these issues are combined with the rigors of coursework and fieldwork (Bughi et al., 2006; Deary et al., 2003; Pidano & Whitcomb, 2012; Schaufeli et al., 2002), and for students

receiving their education through distance-learning formats such as online universities, the possibility of burnout is exacerbated by the physical isolation they experience from faculty, peers, and support services (Cobb, 2004; Ehrenberg et al., 2007; LaPadula, 2003; Moore, 2005; Murphy, Levant, Hall, & Glueckauf, 2007; Nicolaou, Nicolaidou, & Constantinou, 2005; Smith, 2005). Moreover, burnout syndrome has been linked to delayed completion times and attrition in students.

The development of burnout has also been linked to specific personality traits and coping styles. For instance, people who score high on the personality trait of Neuroticism tend to use emotional or avoidant coping and tend to experience moderate to high levels of burnout. Conversely, people who score high on the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness tend to use task-oriented coping and tend to experience low levels of burnout (Alarcon, Eschleman, & Bowling, 2009; Burgess, Irvine, & Wallymahmed, 2010; Chung & Harding, 2009; Ghorpade, Lackritz, & Singh, 2011; Hambrick & McCord, 2010; Hochwalder, 2009; Isaksson Ro et al., 2010; Lent & Schwartz, 2012; Morgan & de Bruin, 2010; Salami, 2011; Wallace, Lee, & Lee, 2010). However, the moderating effects of coping styles on the relationship between personality traits and burnout symptoms have not been explored. As personality traits are not generally malleable, prevention/intervention strategies to combat the development of burnout symptoms must focus on techniques that can be manipulated. Coping styles, in contrast, are learned behavior, and thus it follows that this area may be further explored as a means of reducing burnout symptoms.

Burnout

Although everyone encounters stressors in life, daily stress can usually be handled with a minimal amount of discomfort, and the effects of these stressors are transient. However, when such events are not fleeting, or are not dealt with in a timely manner, the resulting sustained stress can take its toll on an individual, leading to more serious manifestations of stress (Anagnostopoulos & Niakas, 2010; Deary, Watson, & Hogston, 2003; Grant & Campbell, 2007; Jenaro, Flores, & Arias, 2007; Maslach, 1986; Pines & Aronson, 1981; Schaufeli, Bakker, Hoogduin, Schaap, & Klader, 2001). The term *burnout* can be used to identify this phenomenon. Burnout, a term coined by Freudenberg (1974), is described as a combination of physical and mental exhaustion, depersonalization, demoralization, loss of motivation, and diminished sense of personal accomplishment (Baker, 2003; Grant & Campbell, 2007; Jenaro et al., 2007; Maslach, 1986; Maslach & Jackson, 1985; Pines & Aronson, 1981). This particular syndrome has generally been identified in individuals whose primary focus is that of caring for others, including medical and mental health professionals, educators, and one-on-one caregivers (Anagnostopoulos & Niakas, 2010; Deary et al., 2003; Grant & Campbell, 2007; Jenaro et al., 2007; Maslach & Leiter, 2008; Pines & Aronson, 1981; Radey & Figley, 2007).

Physical and mental exhaustion are characterized by fatigue, depression, and a depletion of emotional resources, which lead to an inability to give openly of oneself (Beehr, Bowling, & Bennett, 2010; Grant & Campbell, 2007; Jenaro et al., 2007; Linley & Joseph, 2007; Maslach, Jackson, & Leiter, 1986; Pines & Aronson, 1981; Radey & Figley, 2007; Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002). Depersonalization,

defined as cynical attitudes toward others due to an erosion of compassion and empathy, is opined to follow extremely high levels of emotional exhaustion and is the point at which negative impact shifts from poor quality of life for only the caregiver to poor quality of care for the recipient as well (Deary et al., 2003; Grant & Campbell, 2007; Jenaro et al., 2007; Linley & Joseph, 2007; Maslach et al., 1986; Pines & Aronson, 1981; Radey & Figley, 2007; Schaufeli et al., 2002). Ultimately, job dissatisfaction and negative self-evaluation of one's work lead to a decreased sense of personal accomplishment (Deary et al., 2003; Grant & Campbell, 2007; Jenaro et al., 2007; Linley & Joseph, 2007; Maslach & Leiter, 2008; Pines & Aronson, 1981; Radey & Figley, 2007; Schaufeli et al., 2002).

The consequences of burnout impact are both personal and professional. Contributing factors to burnout symptoms can also be divided into both personal and professional characteristics, including personality traits, coping styles, personal trauma history, gender, and family life, as well as therapeutic orientation, workload, job setting, and work ethic (Anagnostopoulos & Niakas, 2010; Beehr et al., 2010; Deary et al., 2003; Grant & Campbell, 2007; Jenaro et al., 2007; Kahill, 1988; Linley & Joseph, 2007; Maslach & Jackson, 1985; Pines & Aronson, 1981; Radey & Figley, 2007; Rupert & Kent, 2007; Rupert & Morgan, 2005; Rupert, Stevanovic, & Hunley, 2009; Schaufeli et al., 2002). Similarly, prevention and intervention strategies can be categorized as both personal and professional. The promotion of healthy coping skills, physical health, personal support systems, and meditation/relaxation practice were found to combat burnout symptoms on a personal front, while supervision/mentorship, peer consultation,

and an environment of caring service were found to be beneficial in the workplace (Barnett, Baker, Elman, & Schoener, 2007; Grant & Campbell, 2007; Jenaro et al., 2007; Linley & Joseph, 2007; Maslach, 2003; Maslach & Jackson, 1985; Maslach & Leiter, 2005, 2008; Pines & Aronson, 1981).

Background of the Problem

Originally, the concept of burnout was specifically applied to those who work as caregivers for other people, such as medical and mental health professionals (Anagnostopoulos & Niakas, 2010; Deary et al., 2003; Grant & Campbell, 2007; Jenaro et al., 2007; Kahill, 1988; Maslach & Leiter, 2008; Pines & Aronson, 1981; Radey & Figley, 2007; Raquepaw & Miller, 1989; Schaufeli et al., 2002). However, it has since been expanded to include people from all walks of life and at all stages in their careers, including students (Baker, 2003; Deary et al., 2003; Maslach, 2003; Maslach & Leiter, 2008; Pidano & Whitcomb, 2012; Pines, 2004; Salmela-Aro, Kiuru, Leskinen, & Nurmi, 2009; Schaufeli et al., 2002). Symptoms of burnout, including physical/mental exhaustion, depersonalization, demoralization, loss of motivation, and diminished sense of personal accomplishment, pose a significant danger to psychologists, as they not only serve in a supportive role for their clients but also regularly focus on stressful content in their work (Anagnostopoulos & Niakas, 2010; Grant & Campbell, 2007; Jenaro et al., 2007; Linley & Joseph, 2007). Doctoral students training to enter the field as psychologists are susceptible to burnout symptoms as well due to the pressures of coursework, fieldwork, and research (Baker, 2003; Bughi, Sumcad, & Bughu, 2006; Deary et al., 2003; Pidano & Whitcomb, 2012; Schaufeli et al., 2002). Furthermore, most

psychology doctoral students have worked and/or are working in the mental health field (Baker, 2003; Cobb, 2004; Ehrenberg, Jakubson, Groen, So, & Price, 2007). This population has the combined potential for burnout symptoms of both mental health practitioners and students (Pidano & Whitcomb, 2012). An additional facet that was addressed in this study is that of doctoral psychology students who are completing their degree requirements via an online program. Online doctoral psychology students have further potential for burnout due to their physical isolation from faculty, peers, and support services, as well as the increased likelihood that the choice to pursue their education in this format was based in part on a complicated schedule of juggling career, family, community, school, and personal responsibilities (Cobb, 2004; Ehrenberg et al., 2007; LaPadula, 2003; Moore, 2005; Murphy, Levant, Hall, & Glueckauf, 2007; Nicolaou, Nicolaidou, & Constantinou, 2005; Smith, 2005). In the fall of 2010, a reported 6.1 million students were enrolled in online programs (Allen & Seaman, 2011). By the following year, that number had increased to 6.7 million (Allen & Seaman, 2013), an increase of almost 10%. Conversely, the overall annual growth rate for total college enrollment during the same period was less than 1% (Allen & Seaman, 2013). Given that the increase in students enrolling in online education programs is 10 times the rate of overall growth in higher education, this population is becoming increasingly significant.

The current national completion rate for students in doctoral psychology programs is estimated to be between 50% and 65% (Council of Graduate Schools [CGS], 2010). Therefore, at least one in every three students enrolled in such programs is likely to terminate prior to earning a PhD. Furthermore, those candidates who do in fact complete

their psychology PhD programs online generally require 8-10 years to do so, which is double the average time to completion for most other doctoral programs (CGS, 2010). Research suggests that burnout symptoms may play an integral part in both delayed completion times and attrition rates for doctoral students (Deary et al., 2003; Ehrenberg et al., 2007; Golde, 2005; Schaufeli et al., 2002). The resource costs for delayed or failed completion of doctoral psychology students range from a personal sense of failure to a waste of resources for the students, their families, universities, and funding agencies, and ultimately to a reduction in qualified mental health care providers for the community at large (Deary et al., 2003; Di Pierro, 2007; Golde, 2005; Ehrenberg et al., 2007; Schaufeli et al., 2002).

Statement of the Problem

Completion times for doctoral students in the field of psychology are twice as long as those of other disciplines, and the attrition rate is over half of the matriculated students (CGS, 2010). Research indicates a relevant correlation between burnout and delayed completion and/or attrition (Deary et al., 2003; Golde, 2005; Ehrenberg et al., 2007; Schaufeli et al., 2002). A review of the literature also reveals that people who score high on the personality trait of Neuroticism tend to use emotional or avoidant coping and tend to experience moderate to high levels of burnout. Conversely, people who score high on the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness tend to experience low levels of burnout and tend to use task-oriented coping (Alarcon, Eschleman, & Bowling, 2009; Burgess, Irvine, & Wallymahmed, 2010; Chung & Harding, 2009; Ghorpade, Lackritz, & Singh, 2011; Hambrick & McCord,

2010; Hochwalder, 2009; Isaksson Ro et al., 2010; Lent & Schwartz, 2012; Salami, 2011; Morgan & de Bruin, 2010; Wallace, Lee, & Lee, 2010). However, the moderating effects of coping styles on the relationship between personality traits and burnout symptoms have not been explored. As personality traits are not generally malleable, prevention/intervention strategies to combat the development of burnout symptoms must focus on techniques that can be manipulated. Coping styles, in contrast, are learned behavior, and thus it follows that this area may be further explored as a means of reducing burnout symptoms. The problem investigated in this study was how coping styles may moderate the predictive relationships between personality styles and levels of burnout in online doctoral psychology students.

Purpose of the Study

The purpose of this study was to contribute toward filling a gap in research by examining the relation among personality traits, coping styles, and burnout levels in online doctoral psychology students. A quantitative cross-sectional survey design was employed to obtain quantitative data for the aforementioned variables. All data were obtained through an online survey open to doctoral psychology students from an online university. Collected data were then processed using correlational and hierarchical regression analyses to identify any predictive relationships between personality traits, coping styles, and burnout levels in this population. The findings of this study may serve students, faculty, and universities by indicating a need to implement strategies to assess for burnout potential and occurrence, as well as establishing the need for interventions

that may decrease burnout symptoms, thereby improving completion rates and decreasing attrition rates for online doctoral psychology students.

Theoretical Support for the Study

As mentioned previously, there are several components that are likely to influence an individual's level of burnout. However, according to the transactional theory of appraisal and coping, two of the most important factors appear to be personality traits, which influence one's appraisals of stressful situations, and coping styles, which influence one's reactions to those events. For the purposes of this study, personality traits were defined by the widely used five-factor model and measured by the NEO Five-Factor Inventory, third edition (NEO-FFI-3; Costa & McCrae, 1992), whereas coping styles were assessed by the three-dimensional model measured by the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990a). Burnout was defined by the three-dimensional model as measured by the Maslach Burnout Inventory—Student Survey (MBI-SS; Schaufeli et al., 2002). The three instruments used in this study are described briefly below, but are further explained in detail in Chapter 3.

Transactional Theory of Appraisal and Coping

Lazarus and Folkman's (1987) transactional theory of appraisal and coping is based on the supposition that humans constantly evaluate their experiences in terms of their own well-being, and that an individual's reaction to an event is based upon his or her (a) appraisal, or subjective evaluation of the event, and (b) coping, or manner of reacting to that event. Both the appraisal of an event and the resulting employed coping skills are based upon an individual's personality as well as his or her environment.

Personality variables can be either cognitive (e.g., self-esteem, locus of control, and existential beliefs) or motivational (e.g., goals, values, and commitments). Environmental variables include demands, resources, constraints, and time. When personality and environmental variables combine to assess an event, a primary appraisal is made that determines whether or not the individual has a personal stake in the event. A personal stake can take the form of being harmful, threatening, challenging, or beneficial. If the event is irrelevant to the individual, no emotional reaction will occur. However, if the individual does have a personal stake in the event, a secondary appraisal is made that determines which coping techniques to employ. Coping techniques are either problem focused or emotion focused. Problem-focused coping techniques attempt to change the event, whereas emotion-focused coping techniques attempt to regulate emotional distress. Immediate, or short-term, effects of coping choices include affect, physiological changes, and quality of encounter outcome. Adaptational, or long-term, effects of coping choices include psychological well being, somatic health, and social functioning (Lazarus & Folkman, 1987). It is purported that healthy appraisal and coping skills, which are based in reality and have a strong degree of flexibility, lead to positive adaptational effects. Conversely, pathological appraisal and coping skills, which are compulsive, distorted, and/or rigid, lead to negative adaptational effects, such as the symptoms of burnout discussed above (Bowling & Eschleman, 2010; De Vente, Kamphuis, Emmelkamp, & Blonk, 2008; Lazarus & Folkman, 1987).

Five-Factor Model of Personality

Theories of personality are based on an individual's consistent patterns of cognition, emotion, and behavior over time. As personality is viewed as a trait, or a relative constant, it is often used to predict a person's future thoughts, feelings, and actions based on general patterns. The five-factor model of personality categorizes five major domains of personality as Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness (Costa & McCrae, 1992). The domain of Neuroticism identifies patterns of negativism based upon the facets of anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability.

Extraversion describes an individual who is outgoing by measuring warmth, gregariousness, assertiveness, activity, excitement-seeking tendencies, and positive emotions. The third domain of Openness identifies someone who is open to experience based upon levels of fantasy, aesthetics, feelings, actions, ideas, and values. Characteristics of trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness identify patterns of helping others that comprise the Agreeableness domain. Finally, the domain of Conscientiousness includes the facets of competence, order, dutifulness, achievement striving, self-discipline, and deliberation (Costa & McCrae, 1992).

Three-Dimensional Model of Coping Styles

As mentioned above, coping includes both problem-focused and emotion-focused strategies, either of which can have positive or negative consequences depending upon their usage and the specific situation (Lazarus & Folkman, 1987). Endler and Parker

(1990b) proposed that there were actually three distinct coping dimensions: problem-focused, emotion-focused, and avoidant. The distinction of avoidance as a separate category was based on the identification that both problem-based and emotion-based coping strategies are used in attempts to avoid stressful situations. Furthermore, Endler and Parker (1990b) posited the usefulness of assessing coping tendencies, or the pattern of strategies a person uses when faced with stressful situations in general, in order to identify and address areas of strength and weakness. It is important to note that they were not proposing the study of coping styles as entrenched trait characteristics, but rather still within the realm of state characteristics with a focus on current usage patterns. This development was in reaction to criticism of the commonly used Ways of Coping Questionnaire, which assesses coping strategies used in reaction to a singular stressful event (Parker, Endler, & Bagby, 1993). To this end, the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990a) was created, which measures the three dimensions of coping as Task-Oriented, Emotion-Oriented, and Avoidance-Oriented. Task-Oriented (TO) coping describes efforts made toward solving a problem, including altering the situation and cognitive restructuring, whereas Emotion-Oriented (EO) coping involves self-oriented emotional reactions in attempt to relieve the stress caused by a particular problem. Avoidance-Oriented (AO) coping involves both physical and emotional attempts to distract oneself from a stressful situation, thereby ignoring the problem.

Three-Factor Model of Student Burnout

Based upon the early identification of burnout as a phenomenon found exclusively in the field of human services, Maslach and Jackson's (1981) three-factor model included the components of emotional exhaustion, depersonalization, and personal accomplishment. These areas of focus were based upon the role of the caregiver. As the concept of burnout evolved to encompass a variety of careers outside those of human services, the focus shifted to a person's relationship with his or her work in general. Consequently, a modified three-factor model of burnout was devised including the dimensions of exhaustion, cynicism, and professional efficacy (Schaufeli et al., 2002). In order to meet the demands of research with student populations, the Maslach Burnout Inventory (MBI-GS; Maslach et al., 1986), with the designation of *General Survey*, was often used with modified instructions to focus on the individual's school demands. In an effort to create a more robust instrument for use with this demographic, Schaufeli and his colleagues developed the Maslach Burnout Inventory—Student Survey (MBI-SS, 2002). This version maintains the three-factor model of burnout to include the measurement of (a) exhaustion, as fatigue due to the demands of one's schedule and coursework; (b) cynicism, as a negative and/or detached attitude toward one's studies; and (c) efficacy, as one's competence as a student.

Research Question and Hypotheses

The following research question was developed based upon the identification of a gap in research regarding the moderating effects of coping styles (moderator variable) on the relationship between personality traits (predictor variable) and burnout levels

(criterion variable) among online doctoral psychology students. The specific research methodology and statistical analyses are addressed in depth in Chapter 3.

Research Question

Do coping styles moderate relationships between personality traits and burnout in online doctoral psychology students?

$H_0$1: Task-Oriented coping styles will not predict a significant negative correlation between the personality trait of Neuroticism and moderate to high levels of burnout in online doctoral psychology students.

$H_1$1: Task-Oriented coping styles will predict a significant negative correlation between the personality trait of Neuroticism and moderate to high levels of burnout in online doctoral psychology students.

$H_0$2: Emotion-Oriented coping styles will not predict a significant positive correlation between the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness and moderate to high levels of burnout in online doctoral psychology students.

$H_1$2: Emotion-Oriented coping styles will predict a significant positive correlation between the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness and moderate to high levels of burnout in online doctoral psychology students.

$H_0$3: Avoidance-Oriented coping styles will not predict a significant positive correlation between the personality traits of Extraversion, Agreeableness, Openness, and

Conscientiousness and moderate to high levels of burnout in online doctoral psychology students.

$H_1$3: Avoidance-Oriented coping styles will predict a significant positive correlation between the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness and moderate to high levels of burnout in online doctoral psychology students.

Significance of the Study

Burnout has been identified as a key factor in both delayed completion times and attrition rates for doctoral psychology students. Online doctoral psychology students may have an increased susceptibility to burnout due to the additional environmental stressors of physical separation from faculty, peers, and support services (Murphy, Levant, Hall, & Glueckauf, 2007). Additionally, it is more likely that the choice for these students to pursue their education in an online format was based, at least in part, on an already complicated and full schedule of career, family, community, school, and personal obligations (Cobb, 2004; Ehrenberg et al., 2007; LaPadula, 2003; Moore, 2005; Nicolaou, Nicolaidou, & Constantinou, 2005; Smith, 2005). Therefore, if this study identifies a statistically significant relationship between levels of burnout and students' personality traits, and further identifies that coping styles are associated with a moderated effect on the relationship between personality and burnout, it could allow for the establishment of realistic methods of prevention and/or intervention at an early stage in the academic program. Such strategies could reduce the risk of burnout symptoms in

online doctoral psychology students and increase the likelihood of timely program completion, as well as prepare them for high-stress careers.

Social Change

The identification of factors that may increase potential for burnout symptoms in online doctoral psychology students may allow for the implementation of prevention and intervention programs to combat the development of such symptoms. If it is found that coping skills, which can be taught, are associated with fewer burnout symptoms in individuals with personality traits that are highly associated with burnout, interventions may be developed to assist students, faculty, and universities with timely completion of online academic programs. Furthermore, establishing methods by which students can possibly lower their likelihood of developing burnout symptoms may also benefit them in their ensuing high-stress careers. Additionally, for students who are preparing for work with clients, this would not only benefit the student-clinicians themselves, but also serve their current and future clients by producing an increased number of practitioners who are readily available agents of therapeutic change for their clients. According to Linley and Joseph (2007),

> Given that the therapist is second only to the client as a factor predictive of therapeutic success ... it is imperative that therapists take steps to ensure that they are functioning at their best in the therapeutic relationship. Facilitating their own personal well-being and avoiding burnout is clearly one way in which this can be achieved. (Linley & Joseph, 2007, p. 400)

Definition of Terms

Agreeableness (A): Patterns of helping others based on characteristics of trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness; one of the major domains of personality in the five-factor model (Costa & McCrea, 1992).

Avoidance-Oriented (AO) coping: A coping style that involves both physical and emotional attempts to distract oneself from a stressful situation, thereby ignoring the problem (Endler & Parker, 1990a).

Burnout: A combination of exhaustion, cynicism, and a diminished sense of personal efficacy (Schaufeli et al., 2002).

Conscientiousness (C): Competence, order, dutifulness, achievement striving, self-discipline, and deliberation; one of the major domains of personality in the five-factor model (Costa & McCrea, 1992).

Coping: The manner in which an individual reacts to a stressful event (Endler & Parker, 1990a).

Criterion variable: The dependent variable in a mediational hypothesis; also known as an *outcome variable* (Baron & Kenney, 1986).

Cynicism (Cy): A negative and/or detached attitude toward one's studies; a factor in burnout for students (Schaufeli et al., 2002).

Efficacy (Ef): One's perceived competence as a student; a factor in burnout for students (Schaufeli et al., 2002).

Emotion-focused coping: Coping styles that attempt to regulate emotional distress related to a stressful event (Endler & Parker, 1990a).

Emotion-Oriented (EO) coping: A coping style that involves self-oriented emotional reactions in attempt to relieve the stress caused by a particular problem (Endler & Parker, 1990a).

Exhaustion (Ex): Fatigue due to the demands of one's schedule and coursework; a factor in burnout for students (Schaufeli et al., 2002).

Extraversion (E): Outgoing nature measured by warmth, gregariousness, assertiveness, activity, excitement seeking, and positive emotions; one of the major domains of personality in the five-factor model (Costa & McCrea, 1992).

Moderating variable: The intervening independent variable that alters the direction and/or strength of the relationship between the predictor and the criterion variables in a moderational hypothesis (Baron & Kenney, 1986).

Moderational hypothesis: An assumption that the causal relationship between an independent and a dependent variable changes in strength and/or direction due to an independent moderating, or intervening, variable (Baron & Kenney, 1986).

Neuroticism (N): Patterns of negativism based upon the facets of anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability; one of the major domains of personality in the five-factor model (Costa & McCrea, 1992).

Openness (O): Openness to experience based upon levels of fantasy, aesthetics, feelings, actions, ideas, and values; one of the major domains of personality in the five-factor model (Costa & McCrea, 1992).

Personality: An individual's general patterns of cognition, emotion, and behavior that remain stable over time (Costa & McCrea, 1992).

Predictor variable: The independent variable in a mediational hypothesis, upon which the mediator acts in order to alter its relationship with the dependent criterion, or outcome, variable (Baron & Kenney, 1986).

Problem-focused coping: Coping styles that attempt to change a stressful event (Endler & Parker, 1990a).

Task-Oriented (TO) coping: A coping style that involves efforts made toward solving a problem, including altering the situation and cognitive restructuring (Endler & Parker, 1990a).

Assumptions

It was assumed that the research participants obtained through the online participant pool of an online graduate school were a representative sample of online doctoral psychology students, and that the results can be generalized to this population. Additionally, it was assumed that volunteers for this research study invested the time to thoroughly read and honestly respond to the survey questions. Finally, it was assumed that the instruments chosen for this study (e.g., NEO-FFI-3, WAYS, and MBI-SS) were valid and reliable for their respective measurements of the variables for the population sampled.

Limitations

Although the subjects vary in demographic characteristics such as gender, age, nationality, ethnicity, and geographical location, the sample population was extracted from one online university, thus limiting the generalizability of the findings to students from this online university. Furthermore, due to the self-report design of the survey

instruments used in this study, the validity of the measures may be hindered by research participants' personal subjectivity. Such inaccuracies could be either intentional and due to a reluctance to be perceived in a certain light, or unintentional and simply based upon varying moods or personal understanding. Study volunteers were recruited via one online university's participant pool, thereby limiting advertisement of the study to those students who accessed this area of the university's research department. Furthermore, although enrollment in an online doctoral psychology program was a stated requirement to participate in the study, the anonymous nature of the design relied upon the assumption that participants were indeed enrolled in such programs, as the participant pool was open to all students of the aforementioned university.

Delimitations

Study volunteers were recruited via one online university's participant pool, thereby limiting advertisement of the study to those students who accessed this area of the university's research department. Participation was open to online doctoral psychology students currently enrolled in the aforementioned university.

Summary

Excessive exposure to prolonged stress causes an individual to experience a sustained "fight or flight" response (Benson et al., 1974). The ongoing nature of this increased activity in the sympathetic nervous system can lead to a cluster of symptoms known as burnout (Deary et al., 2003; Grant & Campbell, 2007; Jenaro et al., 2007; Linley & Joseph, 2007; Maslach & Leiter, 2008; Pines & Aronson, 1981; Radey & Figley, 2007; Schaufeli et al., 2002). Identifying characteristics include physical and

mental exhaustion, depersonalization, demoralization, loss of motivation, and a decreased sense of personal accomplishment (Grant & Campbell, 2007; Jenaro et al., 2007; Maslach, 1986; Maslach & Jackson, 1985; Pines & Aronson, 1981). Left untreated, burnout can lead to poor quality of life for the individual and poor quality of work, whether this entails assisting others in care-giving professions or attention to tasks in other fields or studies (Anagnostopoulos & Niakas, 2010; Deary et al., 2003; Grant & Campbell, 2007; Jenaro et al., 2007; Kahill, 1988; Maslach & Leiter, 2008; Pines & Aronson, 1981; Radey & Figley, 2007; Raquepaw & Miller, 1989; Schaufeli et al., 2002). For psychologists, the risks of burnout are intensified by the context of their work (e.g., assisting others) as well as the content of their work (e.g., mental health concerns; Anagnostopoulos & Niakas, 2010; Grant & Campbell, 2007; Jenaro et al., 2007; Linley & Joseph, 2007). For the doctoral student specializing in the field of psychology, these issues are combined with the rigors of coursework and fieldwork (Bughi et al., 2006; Deary et al., 2003; Pidano & Whitcomb, 2012; Schaufeli et al., 2002), and for students receiving their education through distance-learning formats such as online universities, the possibility of burnout is exacerbated by the physical isolation they experience from faculty, peers, and support services (Cobb, 2004; Ehrenberg et al., 2007; LaPadula, 2003; Moore, 2005; Murphy, Levant, Hall, & Glueckauf, 2007; Nicolaou, Nicolaidou, & Constantinou, 2005; Smith, 2005).

As burnout syndrome has been linked to delayed completion times and attrition in students, this study attempted to identify coexisting and predictive relationships between personality traits, coping styles, and burnout symptoms in online doctoral psychology

students. If specific personality traits and/or coping styles lend themselves to a predisposition for the development of burnout symptoms, the results of this study could serve as a rationale for students and universities to implement prevention and intervention programs in order to facilitate lower attrition rates and higher completion rates in online doctoral psychology programs.

Chapter 2 includes a review of the foundational theories and current research literature as it applies to personality, coping, and burnout. The methodology of this study is detailed in Chapter 3, including the research design and approach, research questions and hypotheses, setting and sample, ethical considerations, and the survey and assessment instruments that were used (e.g., Student Demographic Questionnaire (SDQ), NEO Five-Factor Inventory, 3rd edition (NEO-FFI-3; Costa & McCrea, 1992), Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990a), and Maslach Burnout Inventory—Student Survey (MBI-SS; Schaufeli et al., 2002). Chapter 3 also includes an explanation of the data collection and analysis procedures. Statistical analyses of the collected data are presented in Chapter 4, and the interpretation of those findings, as well as recommendations for future research, are presented in Chapter 5.

Chapter 2: Literature Review

Introduction

Identification of personality traits was an important component of this study, as it is intended to group subjects with similar cognitive, emotional, and behavioral tendencies. Furthermore, these traits have been shown to have significant relation to the development of burnout symptoms. However, as personality traits are not generally malleable, prevention/intervention strategies to combat the development of burnout symptoms must focus on techniques that can be manipulated. Coping styles, in contrast, are learned behavior, and thus it follows that this area may be further explored as a means of reducing burnout symptoms. This chapter presents a review of the literature relevant to this study. It begins with a brief presentation of the evolution of influential theories of personality, coping, and burnout, followed by a discussion of significant research studies conducted in the combined areas of these variables.

Literature Search Strategy

A literature search was conducted through the following electronic research databases: Academic Search Complete, APA PsycNET, Google Scholar, Health and Psychosocial Instruments, MEDLINE, PsycARTICLES, PsycBOOKS, PsycCRITIQUES, PsycEXTRA, PsycINFO, and SocINDEX. Additionally, the library at the University of Texas—San Antonio was accessed for further research. Main search terms included *burnout*, *stress*, *personality*, *coping*, *psychologists*, *students*, *graduate students*, *doctoral students*, *psychology students*, and *online students*.

Theoretical Evolution

Personality Theory

The study of personality theory has been divided among schools of psychology, to include psychoanalytical, behavioral, humanistic, and the like. This study used G. W. Allport's (1927) approach of personality trait theory as a framework, which describes the various aspects of personality rather than exploring their origins. It should also be noted here that the focus of this study was on healthy personality types, and therefore, discussion of pathological personality theories and studies was beyond the scope of this research project.

Allport (1927) defined a *trait* as "a tendency to reaction which when measured with reliability demonstrates an independence of other variables" (p. 285) and believed it to be the basic unit of personality. He further described a hierarchy of attributes that included traits at the most stable end, followed by *tendencies,* and then *habits,* which were viewed as contextual and malleable (F. H. Allport & Allport, 1921; G. W. Allport, 1927). Traits, as well, were broken down into three levels based upon degree of strength. *Cardinal traits* were deemed the strongest and representative of the core personality of the individual, and those that governed the majority of that individual's behavior. *Central traits* were seen as more common, readily identifiable, and those possessed by most people. Finally, *secondary traits* tended to be situational and often only identified by those close to the subject (Allport, 1937).

Cattell (1945) argued that the previously defined clusters of traits afforded an abundance of overlap and therefore provided little clarity in the pursuit of a succinct

personality theory. Through his research, Cattell reduced Allport's 4,000+ individual traits to a more manageable 16. Cattell arrived at his 16-factor personality theory through the use of factor analysis, combining data from self-report, peer observation, and researcher observation. His establishment of a common taxonomy for personality theory was revolutionary (Cattell, 1945). Currently in its fifth edition, the Sixteen Personality Factor Questionnaire (16 PF) includes the following bi-polar factors: Warmth, Reasoning, Emotional Stability, Dominance, Liveliness, Rule-Consciousness, Social Boldness, Sensitivity, Vigilance, Abstractedness, Privateness, Apprehension, Openness To Change, Self-Reliance, Perfectionism, and Tension. These primary factors are then combined into the five global factors of Extraversion, Anxiety, Tough-Mindedness, Independence, and Self-Control (Cattell, Cattell, & Cattell, 1993).

In reaction to Cattell's work, Eysenck (1952) created an even more simplified theory of personality. He stated that personality can be divided into two super traits: (a) introversion/extroversion, and (b) neuroticism. Basically, every individual falls along the spectrum between introverted and extroverted, and between neurotic and emotionally stable. He eventually added the trait of psychoticism, which spanned the spectrum from delusional to reality based, to create his three-factor PEN model of personality (Eysenck, 1952).

Tupes and Christal (1961) revived the five-factor model, which included the primary personality factors of Neuroticism, Extraversion, Culture, Agreeableness, and Conscientiousness. This model continued to be the basis for an abundance of personality

research throughout the latter half of the 20th century (Goldberg, 1981; McCrae & Costa, 1983; Norman, 1963).

Costa and McCrae's (1985) revision of the five-factor model included a reinterpretation of the trait of Culture to that of Openness, based upon their recognition that the characteristics most readily associated with the trait were originality, imagination, and creativity. Their research further sought to establish a more reliable and valid instrument for the measurement of personality by comparing self-rated questionnaires to those of three to four nonfamily, peer-rated questionnaires (McCrae & Costa, 1983). The resulting NEO Personality Inventory (NEO-PI) measured the five main personality factors of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. Neuroticism identified an individual's place on the spectrum from calm and stable to anxious and insecure, whereas Extraversion ranged from the characteristics of social and affectionate to reserved and solitary. The trait of Openness to Experience described the extent to which one was either more independent and imaginative or more routine and predictable. Finally, the scale of Agreeableness measured tendencies toward trustworthiness and kindness or toward ruthlessness and combativeness, and the Conscientiousness scale distinguished between the characteristics of responsibility and discipline and those of impulsivity and carelessness (Costa & McCrae, 1985).

Over the last two decades, the five-factor model, also known as the Big Five, has continued to serve as the gold standard in personality psychology, as it has proven to be robust across subject age, language, culture, and self- versus observer reports (Ferguson,

2010; Kotov, Gamez, Schmidt, & Watson, 2010; Oh, Wang, & Mount, 2011). Therefore, the five-factor model was used in this study for the assessment of personality traits. In order to provide the rationale for choosing which coping model to employ in this study, the next section explores the evolution of coping styles as a somewhat malleable variable when compared to the stable nature of personality traits.

Coping Theory

Psychoanalytic and hierarchical coping theories have a long history when viewed as personality traits. However, this research project focused on the use of coping processes as moderating variables in stressful situations. Therefore, theories of personality-based coping styles were beyond the scope of this study and are not addressed here.

In coordination with the increased focus on stress during the latter half of the 20th century, researchers such as Lazarus and Folkman (1987) began to focus on coping as a process that changes over time and is based upon the stressful situation encountered. Not only did this bring about a change in viewpoint of coping as a state rather than a trait, but also altered the perception that any given coping strategy was inherently positive or negative; rather, its appropriateness depended upon the specific individual and his or her reaction to a particular event. In essence, coping processes were defined as the cognitive and behavioral strategies that one uses in an attempt to reduce emotional stress (Lazarus, 1993). Lazarus and Folkman (1987) proposed that coping process were either problem focused, in that they were directed at changing the stressful event, or emotion focused, in that they attempted to change the individual's psychological reaction to the stressful

event. In pursuit of a standardized measurement of these coping processes, Folkman and Lazarus (1988) developed the Ways of Coping Questionnaire (WAYS), which identified four problem-focused techniques and four emotion-focused techniques. The problem-based strategies included Confrontive Coping, Seeking Social Support, Planful Problem-Solving, and Accepting Responsibility; whereas the emotion-based strategies included Distancing, Self-Controlling, Escape-Avoidance, and Positive Reappraisal.

Billings and Moos (1981) viewed all coping strategies as an attempt to either approach or avoid a particular stressor. Approach coping responses included Logical Analysis, Positive Reappraisal, Seeking Guidance and Support, and Problem Solving; whereas, Avoidant coping responses were composed of Cognitive Avoidance, Acceptance or Resignation, Seeking Alternative Rewards, and Emotional Discharge. Furthermore, in creating the Coping Responses Inventory (CRI), both an Actual form and an Ideal form were included. The client is then able to indicate how they actually respond to stressful encounters as well as how they would prefer to respond, in order to facilitate treatment planning and evaluation (Moos 1990),

Endler and Parker (1990b) proposed that there were actually three distinct coping dimensions: problem-focused, emotion-focused, and avoidant. The distinction of Avoidance as a separate category was based on the identification of both problem-based and emotion-based coping strategies utilized in attempts to avoid given stressful situations. Furthermore, Endler and Parker (1990b) posited the usefulness of assessing coping tendencies, that is to say the pattern of strategies a person uses when faced with stressful situations in general, in order to identify and address areas of strength and

weakness. It is important to note that they were not proposing the study of coping styles in the sense of entrenched trait characteristics, but rather still within the realm of state characteristics with a focus on current utilization patterns. This was in reaction to the commonly used Ways of Coping Questionnaire, which focused on coping strategies used in reaction to a singular stressful event (Parker, Endler, & Bagby, 1993). To this end, the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990a) was created.

Due to Endler and Parker's focus on coping styles as patterned yet still changeable, their theory was a perfect fit for this study that focused on coping as a moderating variable in the relation between personality traits and burnout. In order to provide a better understanding of the significance of the third variable in this study, a presentation of relevant burnout theory is presented in the next section.

Burnout Theory

During the latter half of the twentieth century, researchers began to study the effects of stress in the workplace on individual workers as well as how the reactions of those workers, in turn, affected their work. These work stress theories, which are discussed below, eventually led to an understanding of the composite symptoms of burnout.

French and Kahn (1962) described an incompatible person-environment dynamic that can lead to role overload, role ambiguity, and role conflict—all resulting in workplace stress. Compatibility can be based upon the objective or subjective judgment of a suitable match, including the degree to which the individual's needs are met by the job (e.g., social, financial, advancement opportunities), or the degree to which the

individual's abilities meet the demands of the job. The level of incompatibility determines the level of stress, and can result in physical illness, psychosomatic complaints, low self-esteem, anxiety, job dissatisfaction, and problems with interpersonal relationships.

According to equity theory, which is based upon social exchange theory, people evaluate their relationships, both personal and professional, for a fair or equitable balance between giving and receiving. Adams (1970) applied this theory to the work stress resulting from a perceived imbalance in a worker's contribution versus gained benefits.

Freudenberger (1974) was the first to assign the term *burnout* to describe a combination of physical, behavioral, and cognitive symptoms experienced by many in the human services professions that lead to an overall loss of spirit due to excessive demands on personal resources. Physical symptoms included fatigue, suppressed immune system, and somatic complaints, whereas irritability, frustration, anger, depression, paranoia, and delusional thinking were examples of the behavioral symptoms. Rigid, stubborn, inflexible, and cynical thinking were also symptomatic of this syndrome.

Rotter's locus of control theory was applied by McIntyre (1982) to the subject of burnout. He posited that people with an external locus of control (i.e., those who believed that other people, luck, or fate had the most control over their lives) were more likely to suffer from the symptoms of burnout. In contrast, those with an internal locus of control (i.e., people who believed they maintained primary influence over the events in their lives) experienced less emotional exhaustion and depersonalization, and enjoyed a greater sense of self-efficacy.

Meier (1983) described three key cognitive expectations, or patterns of automatic thinking, which could affect an individual's susceptibility to work stress and burnout as: reinforcement, outcome, and efficacy. Low expectations for positive reinforcement, personal control over desired outcomes, and/or self-efficacy, alone or in any combination, could be contributing factors.

Hobfoll (1989) proposed that people could possess or have access to four types of personal resources: objects, conditions, personal characteristics, and energies. Objects were described as physical resources like a house, car, or books. Conditions were situational resources, as in social support, supervision, or therapy. Personal characteristics included personality traits such as conscientiousness, dedication, and motivation; and energies referred to any resources that could be used to obtain the other resources. According to this theory, a reduction in any of the one's personal resources could lead to burnout, whereas an increase in any of these resources could serve as a prevention or intervention for burnout.

Psychosocial job strain was described by Theorell and Karasek (1996) as a result of the combination of work demands, support, and control. When demands (e.g., workload, expectations, time, and constraints) were high, and supports (e.g., social, supervisory, and resource access) and control (i.e., personal control over work activities) were low, the negative effects of job strain were encountered.

When Pines and Aronson (1981) first began their research into the area of burnout in the 1970s, they found that individuals were extremely apprehensive about discussing their feelings of what they considered to be failure in their work lives (i.e., any perceived

limitations or weaknesses) because they each felt alone in their predicament. According to social psychology, this is a common phenomenon known as "the fallacy of uniqueness" or "pluralistic ignorance," as proposed by Allport (1921), in which an individual erroneously believes himself or herself to be in the vast minority whether it be in situation, condition, or opinion (Halbesleben & Buckley, 2004; Suls, Wan, Barlow, & Heimberg, 1990). Therefore, although Pines and Aronson (1981) found the number of people to be experiencing burnout symptoms to be significant, it was a rarely discussed issue. Defining this collection of symptoms as *burnout* aided individuals in accepting that they were not alone in their experience and in beginning to understand the causes of this overwhelming form of stress (Freudenberger, 1974; Kahill, 1988; Maslach & Jackson, 1985; Pines & Aronson, 1981; Raquepaw & Miller, 1989; Schaufeli et al., 2001).

With the turn of the twenty-first century came an expansion of the study of burnout to include students. Research began to focus on the stressors that affect students, especially those in higher education and those training to enter fields that are highly susceptible to burnout (e.g., medicine, nursing, and mental health), noting that "training is considered a vulnerable time when students may learn to manage stress, or develop either maladaptive stress coping mechanisms or attitudes of denial" (Bughi et al., 2006, p. 5).

The next section will present a review of the literature published over the last five years that combines the variables of personality, coping, and burnout, which are the focus of this research project.

Contemporary Research

Personality and Burnout

Alarcon, Eschleman, and Bowling (2009) conducted a meta-analysis of 121 studies that included the five-factor model of personality and the Maslach Burnout Inventory (MBI; Maslach et al., 1986) dimensions of Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Using regression analyses, they found that the five-factor model traits together predicted 29% of the variance in Emotional Exhaustion, 26% of the variance in Depersonalization, and 23% of the variance in Personal Accomplishment. The most significant results included a positive relationship between the personality trait of Neuroticism and the development of Emotional Exhaustion and Depersonalization. Additionally, the personality trait of Agreeableness was negatively related to Depersonalization. Finally, a reduced sense of Personal Accomplishment was negatively associated with the personality trait of Extraversion.

Chung and Harding (2009) investigated the relation of personality to burnout in residential treatment caregivers working, in the United Kingdom, with individuals who had cognitive impairments and behavioral challenges. Their survey of 103 caregivers revealed that those with high degrees of Neuroticism tended to experience high levels of Emotional Exhaustion and low levels of Personal Accomplishment. Conversely, those with high levels of Extraversion tended to experience low levels of Emotional Exhaustion and high levels of Personal Accomplishment. Contrary to their expectations, their results also indicated that as participants' scores on Conscientiousness increased, so did their levels of Depersonalization.

Hochwalder (2009) conducted a study of the effects of the three-factor personality traits on burnout levels in 659 Swedish nursing home nurses. His results indicated that Emotional Exhaustion was directly related to Neuroticism. Furthermore, low levels of Neuroticism were found in subjects with high levels of Personal Accomplishment. Low scores on the scales of Extraversion and Conscientiousness were seen in those with low levels of Personal Accomplishment.

In a survey of 340 professional counselors from across the United States, Lent and Schwartz (2012) found that although the five-factor model traits together accounted for 41% of Emotional Exhaustion, 20% of Depersonalization, and 23% of Personal Accomplishment, it was not evenly distributed across the five traits. Neuroticism was positively associated with the burnout dimensions of Emotional Exhaustion, Depersonalization, and a Reduced Sense of Personal Accomplishment. Agreeableness was inversely related to Depersonalization and directly related to Personal Accomplishment.

Ghorpade, Lackritz, and Singh (2011) investigated the role of personality traits as mediating factors between role conflict and burnout in faculty members (N = 263) at a Southern California university. Their findings suggested that both increased Emotional Stability (the reverse of Neuroticism) and Extraversion lead to decreases in Emotional Exhaustion and increases in Personal Accomplishment. Likewise, high levels of Agreeableness and Conscientiousness resulted in high levels of Personal Accomplishment. The only personality factor found in this study to affect Depersonalization, however, was that of Agreeableness in that faculty members who

demonstrated a strong affiliation with that personality trait were less likely to experience that particular dimension of burnout.

In a study of 340 Nigerian university professors, Salami (2011) determined that the personality trait of Neuroticism was related to Emotional Exhaustion, Depersonalization, and a reduced sense of Personal Accomplishment, whereas Conscientiousness had the opposite relation across all three dimensions of burnout. Openness was also found to have a negative association with Emotional Exhaustion and Depersonalization. Finally, Extraversion was associated with lower levels of Emotional Exhaustion and high levels of Personal Accomplishment. Agreeableness, however, was not found to have a significant relationship with burnout.

Morgan and de Bruin (2010) utilized the Maslach Burnout Inventory – Student Survey (MBI-SS; Schaufeli et al., 2002) to assess the three dimensions of burnout as related to the Five-Factor Model of personality traits with 297 South African university students. Their results indicated that high degrees of Neuroticism were found in subjects who also exhibited high levels of Exhaustion and Cynicism, and low levels of Efficacy. High degrees of Conscientiousness were associated with low levels of Cynicism and high levels of Efficacy. Agreeableness was negatively related to Cynicism. Neither personality factor of Extraversion nor Openness was found to be significantly associated with burnout in this study.

Personality and Coping

Burgess, Irvine, and Wallymahmed (2010) explored the relationship between personality and coping in nurses working in an intensive care unit (N=46). Their study

revealed that the personality traits of Openness, Conscientiousness, and Agreeableness were positively correlated with problem-focused coping styles, whereas the personality trait of Neuroticism was routinely associated with emotion-focused coping styles.

In a study of undergraduate students (*N*=49), Hambrick and McCord (2010) found that participants who scored high on the personality traits of Conscientiousness, Extraversion, and Agreeableness, also employed proactive coping techniques which were mainly task-oriented in nature. Conversely, those who scored high on the personality trait of Neuroticism, were significantly less likely to use proactive coping techniques, although they were not found to be any more likely to use avoidance-oriented techniques. Emotion-oriented coping techniques were not explored in this study.

Coping and Burnout

In a study of 227 physicians, Isaksson Ro and colleagues (2010) explored the impact of counseling interventions targeted at implementing new coping strategies for burned out individuals. The results of their study concluded most significantly that a reduction in emotion-focused coping, without regard to a necessary increase in active coping, lead to a reduction in the burnout symptom of emotional exhaustion (Isaksson Ro et al., 2010).

Wallace, Lee, and Lee (2010) examined the relation between coping and burnout. Their research revealed that increased use of emotion-oriented and avoidance-oriented coping strategies were directly associated with increased levels of burnout in counselors (*N*=232) working specifically with sexual abuse and/or substance abuse clients.

Personality, Coping, and Burnout

In a study of Japanese nursing home caregivers of elderly patients, Narumoto et al. (2008) compared the results of 72 caregivers' personality traits, coping styles, and burnout assessments. Positive correlations were found between the personality trait of Neuroticism and the burnout dimension of Depersonalization. Furthermore, subjects who generally used emotion-oriented coping strategies were more likely to experience increased levels of Emotional Exhaustion.

Burnout in Online Students

According to a study of online students conducted by Nichols (2010), stated reasons for attrition from the program were most often associated with personal and professional hardships, including health, family, finances, and work pressures, rather than academic reasons. However, those who reported persisting in their courses regardless of the aforementioned personal and professional obstacles cited the assistance of instructors and academic advisors who demonstrated an interest in the students' issues of concern and provided an environment of understanding and support.

Ramos (2011) studied perceived stress levels and coping styles of 72 non-traditional graduate students in both distance learning programs and on-campus programs. Results indicated no significant differences between the two sample groups, but rather attributed the high stress levels for both groups to be associated with their mutual status as non-traditional students. According to Allen and Seaman (2008), students in online distance learning programs tend to be non-traditional students, including older adults who are more likely to have obligations and responsibilities

associated with careers and families as opposed to students in traditional face-to-face classrooms.

In a study of 103 online postgraduate students, the majority of the students surveyed scored in the moderate to high ranges on the Maslach Burnout Inventory subscales of emotional exhaustion (78%), reduced sense of personal accomplishment (85%), and depersonalization (73%). The main reported sources of stress were combined academic, career, and family commitments (Pavlakis & Kaitelidou, 2012).

Summary

According to a review of the literature, personality traits are associated with levels of burnout across various cultures, careers, and levels of education. The most significant relationships indicated that individuals who scored highly on the five-factor personality trait of Neuroticism were more likely to also experience the three burnout dimensions of Emotional Exhaustion, Depersonalization/Cynicism, and reduced sense of Personal Accomplishment or Efficacy. Low levels of the dimensions of Emotional Exhaustion and Depersonalization, or Cynicism, were found in individuals who scored highly on the personality traits of Extraversion and Agreeableness, respectively. Finally, those who experienced high levels of Personal Accomplishment and Efficacy tended to also score highly on personality traits of Extraversion, Agreeableness, and Conscientiousness. With regard to coping styles, individuals who regularly utilized Emotion-Oriented and Avoidance-Oriented coping techniques were more likely to also develop symptoms of burnout, whereas those who often used Task-Oriented coping were less prone to developing them.

Over the last 5 years, there have been several studies that have established strong predictive relationships between the variables of personality and burnout. Fewer studies have indicated a significant correlation between personality traits and coping styles and between coping styles and burnout. Moreover, only one study has explored coping styles as a moderating or mediating variable upon the relationship between personality traits and burnout during this timeframe, and none of these recent studies focused on the growing population of online doctoral psychology students who have slower completion times and higher attrition rates which have been linked to burnout. Therefore, this study contributes to filling this gap in research. Furthermore, if this study identified a statistically significant relationship between levels of burnout and students' personality traits, and further identified that coping styles are associated with a moderated effect on the relationship between personality and burnout, it could allow for the establishment of realistic methods of prevention and/or intervention at an early stage in the academic program. Such strategies could reduce the risk of burnout symptoms in online doctoral psychology students and increase the likelihood of timely program completion, as well as prepare them for high-stress careers.

Chapter 3: Methodology

Introduction

This chapter serves to set forth the methodology for this study of personality, coping, and burnout in online doctoral psychology students. The research design and approach are followed by the specific research question and hypotheses. Setting and sample are then presented, along with ethical considerations for participants in the study. Next, the instrumentation and materials are detailed, including the reliability, validity, and appropriateness of the chosen measurements. Finally, data collection and analysis procedures are reviewed.

Research Design and Approach

In an effort to address the problem of high attrition rates and prolonged completion times in online doctoral psychology students, this quantitative survey study was designed to investigate the possible moderating effects of coping styles on the predicted relationships between personality traits and burnout symptoms. This study used a cross-sectional survey methodology to collect quantitative data related to the independent variable of personality traits, the dependent variable of burnout level, and the moderating variable of coping styles. Substantial research has established significant relationships between personality traits and burnout. However, as personality traits are relatively stable in nature, another more malleable factor would be required to develop interventions for burnout. Therefore, this study assessed coping styles, which can be learned, as a moderating variable. Simple and multiple regression analyses were used to examine relationships among the variables. Should the results of this research support

that the hypothesized predictive relationships between personality traits, coping styles, and burnout symptoms exist in online doctoral psychology students, it could serve as rationale for the implementation of prevention and intervention strategies using learned coping skills to combat burnout, as well as the associated problems of attrition and prolonged completion times. To that end, participants were asked to complete four questionnaires via Survey Monkey: the Student Demographic Questionnaire (created for this study), the NEO Five-Factor Inventory, third edition (NEO-FFI-3; Costa & McCrea, 1992), the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990a), and the Maslach Burnout Inventory—Student Survey (MBI-SS; Schaufeli et al., 2002). Demographic data were used to identify patterns among participants based upon personal, academic, and professional characteristics as a basis for sample representativeness, additional post-hoc analysis, and potential study replication. The NEO Five-Factor Inventory (NEO-FFI-3; Costa & McCrea, 1992) was employed to describe the extent to which participants demonstrated the five personality factors of Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C). The Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990a) was used to identify general patterns of coping styles as Task-Oriented (TO), Emotion-Oriented (EO), or Avoidant-Oriented (AO). Finally, the Maslach Burnout Inventory—Student Survey (MBI-SS; Schaufeli et al., 2002) served to assess levels of burnout on the three dimensions of Exhaustion (Ex), Cynicism (Cy), and Efficacy (Ef).

Setting and Sample

Online doctoral psychology students were recruited through the university's experiment management system, where a description of the study was provided (Appendix A). This study was open to all doctoral psychology students currently enrolled in the university regardless of age, sex, or ethnicity. However, it was presented only in the English language. Subjects wishing to participate in the study followed the link provided redirecting them to this study's survey posted on the Survey Monkey website (www.surveymonkey.com). Participants were then asked to complete the Informed Consent (Appendix B), the Student Demographic Questionnaire (SDQ; Appendix C), the NEO Five-Factor Inventory (NEO-FFI-3; Costa & McCrea, 1992; Appendix D), the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990a; Appendix E), and the Maslach Burnout Inventory—Student Survey (MBI-SS; Schaufeli et al., 2002; Appendix F). The entire survey was estimated to require approximately 30-35 minutes. Subjects individually completed the survey immediately, as participation was independent and ongoing. However, recruiting continued until a sample of at least 67 participants was obtained. This sample size was calculated based upon an a priori analysis for a multiple regression study using a medium effect size of .15, a power level of .8, and an alpha level of .05 (Soper, 2011).

Ethical Considerations

Due to the anonymous and voluntary nature of this study, there was a minimal level of risk for participants in this research project. As the sole researcher, I had no knowledge of the subjects' names, no identifying data were collected, and I have kept the

data in a secure and password-protected Excel spreadsheet. Informed and voluntary consent was required prior to commencing with any research activities, and subjects were informed that there would be no penalty for choosing not to participate in the study at the outset or at any point thereafter. Although there may have been some psychological discomfort incurred by responding to questions about one's personality characteristics, coping styles, and levels of burnout, it was likely to be minimal. Therefore, risk of harm incurred from participating in this study was assessed to be low.

Instrumentation and Materials

Student Demographic Questionnaire (SDQ)

Personal, academic, and professional demographic information was obtained for each participant based upon a questionnaire I developed (Appendix C). Examples of personal information include age, gender, race/ethnicity, relationship status, and parental status. Academic information entails program specialty and stage of completion. Finally, professional questions involve amount of time spent in school-related work (e.g., practicum, internship) and career-related work. Demographic data can be used to describe participants based upon personal, academic, and professional characteristics as a basis for sample representativeness, additional post-hoc analysis, and potential study replication. The *SDQ* is estimated to take less than 1 minute to complete.

NEO Five-Factor Inventory, Third Edition (NEO-FFI-3)

The NEO Five-Factor Inventory, third edition (NEO-FFI-3; Costa & McCrea, 1992; Appendix D) is a brief, comprehensive measure of the five domains of personality. With 60 items, it is a shortened version of the NEO Personality Inventory, third edition

(NEO-PI-3), which contains 240 items. It is appropriate for use with individuals 12 years of age and older and can be read to those with literacy issues. It is not appropriate for individuals who are unable to complete reliable and valid self-reports due to disorders such as dementia or acute psychosis (McCrae & Costa, 2010).

The NEO-FFI-3 is a 60-item, self-report questionnaire that takes approximately 10-15 minutes to complete. The items, which are based upon a 5-point scale ranging from *strongly disagree* to *strongly agree*, are grouped into the five facets of Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C), with 12 items in each. The individual facets are scored separately and then converted to *T*-scores, which are rated as high ($T > 55$), average ($T = 45\text{-}55$), or low ($T < 45$; McCrae & Costa, 2010).

As reviewed in *Mental Measurements Yearbook* (Botwin, 1995), the NEO-FFI-3 is considered to be a reliable and valid measure of the five traits of personality known as Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C). Domain-level reliability coefficients range from .86 to .95, while facet-level reliability coefficients range from .56 to .90. Additionally, test-retest reliability has been found for both the short and long term. Consensual validity has been found when comparing self-, peer, and spouse reports, whereas construct, convergent, and divergent scale validity has been established through correlations with other instruments, such as the Myers-Briggs Type Indicator, Minnesota Multiphasic Personality Inventory, and California Psychological Inventory (Botwin, 1995).

Coping Inventory for Stressful Situations (CISS)

The Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990a; Appendix E) is a brief measure of the following three types of coping styles: Task-Oriented (TO), Emotion-Oriented (EO), and Avoidance-Oriented (AO). The AO scale can be further broken down into two subscales: Distraction and Social Diversion. The adult form of the questionnaire is appropriate for use with individuals aged 18 years and older, and can be completed in approximately 10 minutes (Endler & Parker, 1990a).

The CISS is a 48-item, self-report questionnaire which uses a six-point Likert Scale for respondents to assess their levels of engagement in a variety of activities when faced with a stressful situation, where a score of 1 indicates "Not at all" and a score of 5 indicates "Very much." The items are grouped into the three dimensions of Task-Oriented (TO), Emotion-Oriented (EO), and Avoidance-Oriented (AO; Endler & Parker, 1990a).

Based upon review in the *Mental Measurements Yearbook* (Tirre, 2003), the *CISS* is considered to be a reliable and valid measure of the three-dimensional coping styles known as Task-Oriented (TO), Emotion-Oriented (EO), and Avoidance-Oriented (AO). Internal consistency measures for the three facets are estimated as .90 for TO, .86 for EO, and .82 for AO. Test-retest reliability was estimated as .73 for TO, .70 for EO, and .58 for AO. Construct validity has been established through factor analysis correlations to several widely used instruments, including the Ways of Coping Questionnaire, the Minnesota Multiphasic Personality Inventory, and the Beck Depression Inventory (Tirre, 2003).

Maslach Burnout Inventory—Student Survey (MBI-SS)

The Maslach Burnout Inventory (Maslach et al., 1986) was modified for use with university students by Schaufeli et al. (2002). The resulting Maslach Burnout Inventory – Student Survey (MBI-SS; Schaufeli et al., 2002; Appendix F) is a 15-item self-report questionnaire which can be completed in 5-10 minutes. Items are answered based upon frequency of experience using a 7-point Likert scale (0-6) where: 0 = Never, 1 = A few times a year or less, 2 = Once a month or less, 3 = A few times a month, 4 = Once a week, 5 = A few times a week, and 6 = Every day. The items are grouped into three subscales that assess the different aspects of burnout: Exhaustion (Ex), Cynicism (Cy), and Efficacy (Ef; see Appendix C).

A high degree of burnout is reflected in high scores on Exhaustion (16-30) and Cynicism (13-24) and low scores on Efficacy (0-12). Moderate degrees of burnout are reflected in mid-level scores on Exhaustion (11-15), Cynicism (9-12), and Efficacy (13-18). A low degree of burnout is reflected in low scores on Exhaustion (0-10) and Cynicism (0-8) and high scores on Efficacy (19-36).

The MBI-SS is considered to be a valid and reliable measurement of the three burnout dimensions of Exhaustion (Ex), Cynicism (Cy), and Efficacy (Ef), according to a review in the *Mental Measurements Yearbook* (Fitzpatrick, 2005). Internal consistency reliabilities for the General version are estimated at .88 for Exhaustion, .79 for Cynicism, and .79 for Efficacy. Test-retest reliability ranges from .54 to .82; however, Fitzpatrick noted that this is acceptable when measuring a variable that is expected to fluctuate over time. Consensual validity has been found through the comparison of self- and observer-

ratings; whereas construct validity is estimated as moderate when compared with measures of depression, stress, and anxiety (Fitzpatrick, 2005).

Data Collection

Study participants followed a link to Survey Monkey (www.surveymonkey.com) via the research department's experiment management system. Once there, they were asked to complete the Informed Consent, Student Demographic Questionnaire (SDQ), the NEO Five-Factor Inventory (NEO-FFI-3; Costa & McCrea, 1992), the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990a), and the Maslach Burnout Inventory – Student Survey (MBI-SS; Schaufeli et al., 2002).

Data Screening

Survey responses were downloaded to an excel spreadsheet where they were examined for completeness and individual surveys were scored. Missing responses were addressed as prescribed by the publishers' manuals for the specific surveys. The NEO-FFI-3 requires that missing responses be replaced with a "neutral" response. A test with fewer than ten missing responses can be scored as valid using the replacement method as long as no more than four of the missing items are within the same domain (Costa & McCrea, 1992). This procedure was used with no more than one domain item for 21 surveys. The CISS instructs that a valid score can be obtained if five or fewer responses are missing or ambiguous, and are replaced with a response of "3" (Endler & Parker, 1990a). This procedure was used for no more than one item per domain with 11 surveys. The MBI-SS prescribes that one missing response per domain may be replaced with the

individual's average score for that domain (Schaufeli et al., 2002). This procedure was used on six surveys.

Data Analysis

Research data were imported into Statistical Package for the Social Services (SPSS) software for data analysis. Demographic data were analyzed through basic measures of central tendency. A multiple regression analysis model using the PROCESS macro was employed to investigate whether the association between personality traits and level of burnout were moderated by coping styles and to address the following research questions.

Research Question and Hypotheses

Do coping styles moderate statistically significant relationships between personality traits and burnout in online doctoral psychology students?

$H_0$1: Task-Oriented coping styles will not predict a significant negative correlation between the personality trait of Neuroticism and moderate to high levels of burnout in online doctoral psychology students.

$H_1$1: Task-Oriented coping styles will predict a significant negative correlation between the personality trait of Neuroticism and moderate to high levels of burnout in online doctoral psychology students.

$H_0$2: Emotion-Oriented coping styles will not predict a significant positive correlation between the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness and moderate to high levels of burnout in online doctoral psychology students.

$H_1$2: Emotion-Oriented coping styles will predict a significant positive correlation between the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness and moderate to high levels of burnout in online doctoral psychology students.

$H_0$3: Avoidance-Oriented coping styles will not predict a significant positive correlation between the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness and moderate to high levels of burnout in online doctoral psychology students.

$H_1$3: Avoidance-Oriented coping styles will predict a significant positive correlation between the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness and moderate to high levels of burnout in online doctoral psychology students.

The research questions were addressed by entering the predictor (personality traits), moderator (coping styles), and interaction (personality traits x coping styles) variables into a simultaneous regression model. For each of these variables that was found to have a significant relation with the criterion variable (burnout), the slopes were then examined for strength of relation among the variables to determine the extent to which coping styles affect the relation between personality traits and burnout in this population. The predictor variables included the five personality traits of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness, as measured by the NEO Five-Factor Inventory (NEO-FFI-3; Costa & McCrea, 1992). The moderating variables were the three coping styles of Task-Oriented, Emotion-Oriented, and Avoidant-

Oriented, as measured by the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990a). The criterion variables were the three burnout domains of Exhaustion, Cynicism, and Professional Efficacy, as measured by the Maslach Burnout Inventory – Student Survey (MBI-SS; Schaufeli et al., 2002). The rationale for utilizing this data analysis plan was based upon the Moderation Model presented in the next section.

Moderation Model

Baron and Kenny (1986) proposed the moderation model (see Figure 1) that describes how a moderator variable influences the effect that a predictor variable has on a criterion variable by changing either or both the direction and strength of that relationship. Employing the moderation model, this research assessed differences in the effect of personality traits on burnout in light of the moderating effects of coping styles. *Path a*, in Figure 1, depicts the direct influence of personality, the predictor variable (X), on burnout, the criterion variable (Y). *Path b* shows the direct influence of coping, the moderating variable (M), on burnout, the criterion variable (Y). *Path c*, however, indicates the combined effect that personality, the predictor variable (X), and coping, the moderating variable (M), have on burnout, the criterion variable (Y). If this interaction is significant, then moderation is supported.

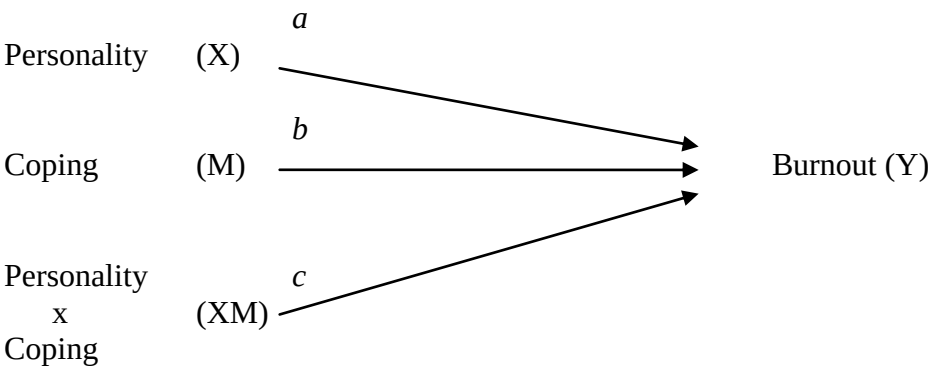

Figure 1. Moderation model. From "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," by R. M. Baron & D. A. Kenny, 1986, *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Summary

This chapter outlined the methodology procedures for the current study. Online doctoral psychology students were recruited via the research department's experiment management system. Voluntary participants were asked to complete four surveys: a Student Demographic Questionnaire (SDQ), the NEO Five-Factor Inventory, 3rd Edition (NEO-FFI-3; Costa & McCrea, 1992), the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990a), and the Maslach Burnout Inventory – Student Survey (MBI-SS; Schaufeli et al., 2002) through Survey Monkey (www.surveymonkey.com). Collected data were examined through a series of multiple regression analyses in order to determine the existence of predictive and moderating relationships between personality traits, coping styles, and burnout symptoms in online doctoral psychology students. The results of these analyses are presented in the following chapter.

Chapter 4: Results

Introduction

The purpose of this study was to contribute toward filling a gap in research by examining the relation among personality traits, coping styles, and burnout levels in online doctoral psychology students. Substantial research has established significant relationships between personality traits and burnout (e.g., Alarcon, Eschleman, & Bowling, 2009; Chung & Harding, 2009; Ghorpade, Lackritz, & Singh, 2011; Hochwalder, 2009; Lent & Schwartz, 2012; Morgan & de Bruin, 2010; Narumoto et al., 2008; Salami, 2011). However, as personality traits are relatively stable in nature, another more malleable factor would be required to develop interventions for burnout. In an effort to address the problem of high attrition rates and prolonged completion times in online doctoral psychology students, this quantitative survey study was designed to investigate the possible moderating effects of coping styles on the predicted relationships between personality traits and burnout symptoms. It was hypothesized that in online doctoral psychology students, (a) Task-Oriented coping styles would predict a negative correlation between the personality trait of Neuroticism and moderate to high levels of burnout, and (b) Emotion-Oriented and Avoidance-Oriented coping styles would predict significant positive correlations between the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness and moderate to high levels of burnout.

This chapter reviews the data collection procedures and presents the results of the data collected for this study. The demographic characteristics of the obtained purposive

sample are described. Finally, the statistical analyses of the collected data are reported for the purposes of evaluating the research question and hypotheses.

Data Collection

Study participants were recruited through the university research department's experiment management system. Qualified and interested parties were then directed through a link to Survey Monkey (www.surveymonkey.com), where they were asked to complete the Informed Consent, Student Demographic Questionnaire (SDQ), NEO Five-Factor Inventory (NEO-FFI-3; Costa & McCrea, 1992), Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990a), and Maslach Burnout Inventory—Student Survey (MBI-SS; Schaufeli et al., 2002). The entire survey was estimated to require approximately 30 to 35 minutes but actually took participants an average of 16 minutes to complete. The study was posted and available to participants over a 6-month period, during which 67 individuals completed the combined survey.

Demographics

A total of 75 volunteers consented to participate in completion of the study's surveys. Of those, eight (11%) surveys were incomplete and excluded from the sample. The following demographic summary is based upon the remaining 67 participants (see Table 1). Participant age ranged from 26 to 69 years, with the majority (52.2%) in their 40s. Sixty-two volunteers (92.5%) were female, and only five (7.5%) were male. Approximately half (50.7%) reported that they were currently raising children at home full or part time. The sample was also split fairly evenly between those who identified as being single (49.3%) and those living with a partner (49.3%), with one additional

participant stating a status of widowed. The majority of participants endorsed the racial category of White (77.6%), followed by Black at 19.4%, and American Indian/Native Alaskan at 1.5%. Three participants also considered themselves to have Hispanic ethnicity. One participant declined to respond to the question of racial/ethnic group. Of the nine specialties offered in the university's Psychology PhD programs, the majority of the study participants were in the Clinical (28.4%) and Organizational (22.4%) tracts. Educational (13.4%), General (11.9%), Counseling (7.5%), Health (6.0%), Social (6.0%), and Forensic (4.5%) areas were also represented. Only the specialty of School Psychology was not represented in the sample. Students reported having completed an average 8.97 quarters of coursework, 1.57 quarters of fieldwork (note that not all specialties require practicum/internship hours), and 4.13 quarters of dissertation research. Finally, participants spent an average of 18.3 hours per week on academic work, 14.66 hours per week working in the mental health field, and 17.34 hours per week working in non-mental health related fields (see Table 2).

Table 1

Participant Demographics

Variable	*n*	Percent
Psychology PhD specialty (*N* = 67)		
Clinical	19	28.4%
Counseling	5	7.5%
Educational	9	13.4%
Forensic	3	4.5%
General	8	11.9%
Health	4	6.0%
Organizational	15	22.4%
Social	4	6.0%
School	0	-
Marital status (*N* = 67)		
Single (never married/divorced)	33	49.3%
Living with partner (incl. married)	33	49.3%
Widowed	1	1.4%
Raising children at home (*N* = 67)		
Full-time or part-time	34	50.7%
None	33	49.3%
Age (*N* = 67)		
20-29 years	2	3.0%
30-39 years	17	25.4%
40-49 years	35	52.2%
50-59 years	10	14.9%
60-69 years	3	4.5%
Sex (*N* = 67)		
Female	62	92.5%
Male	5	7.5%
Race (*N* = 67)		
Declined to answer	1	1.5%
American Indian/Native Alaskan	1	1.5%
Asian	0	-
Black/African American	13	19.4%
Native Hawaiian/Pacific Islander	0	-
White	52	77.6%
Other	0	-
[Hispanic/Latino ethnicity]	3	4.5%

Table 2

Participant Time Spent in Academic and Career Pursuits

Variable	*M*	*SD*
Quarters in program areas: (*N* = 67)		
General courses	8.97	5.137
Practicum/internship	1.57	2.401
Dissertation	4.13	6.025
Hours per week spent in each pursuit: (*N* = 67)		
University studies	18.03	10.711
Mental health career	14.66	18.229
Other field career	17.34	19.670

Results

A comparison of the study sample to the normative population for each of the included assessment instruments is presented in Table 3. With regard to the NEO-FFI-3, the difference between the sample mean and that of the normative population was not statistically significant. The difference was, however, statistically significant for the other four domains. Differences in means for the CISS domains of Task-Oriented coping and Avoidant-Oriented coping were statistically significant, while the difference for the Emotion-Oriented coping domain means was not. It should be noted, however, that none of the sample participants' scores on the Task-Oriented coping style assessment rose above the upper limit of the moderate category; conversely, none of the their scores on the Emotion-Oriented coping style scale fell beneath the lower limit of the moderate category. Finally, the differences between the sample's and standardized mean scores on all three of the MBI-SS domains were statistically significant.

Table 3

Comparison of Study Means to Published Means by Instrument

	Sample		Published	
Instrument	*M*	*SD*	*M*	*SD*
NEO-FFI-3				
Neuroticism (N)	19.9	8.6	20.8	7.7
Extraversion (E)	30.1*	6.2	28.2	6.2
Openness (O)	35.6**	6.4	28.4	6.3
Agreeableness (A)	34.2**	6.2	32.1	6.0
Conscientiousness (C)	35.0**	6.5	32.5	6.3
CISS				
Task-Oriented (TO)	65.5**	9.9	58.6	9.3
Emotion-Oriented (EO)	38.1	12.6	40.9	11.4
Avoidance-Oriented (AO)	45.7**	11.6	41.4	9.9
MBI-SS				
Exhaustion (Ex)	10.7**	7.1	20.9	10.8
Cynicism (Cy)	10.2*	9.1	8.7	5.9
Professional Efficacy (Ef)	27.2**	7.1	34.6	7.1

* $p < .05$, ** $p < .01$.

Prior to conducting the specific regression analyses to test the study's hypotheses, a correlation matrix was completed to identify statistically significant relationships among the predictor, moderator, and criterion variables (see Table 4).

Table 4

Correlations Among Predictor, Moderator, and Criterion Variables

	Personality trait					Coping style			Burnout domain		
	N	E	O	A	C	TO	EO	AO	Ex	Cy	Ef
N	-	-.46**	-.08	-.31*	-.41**	-.55**	.73**	-.11	.56**	.51**	-.20
E		-	.14	.26*	.33**	.46**	-.31*	.11	-.35**	-.37**	.24*
O			-	.10	.10	.35**	-.30*	-.26*	-.02	-.15	.38**
A				-	.35**	.43**	-.04	.26*	-.17	-.17	.11
C					-	.58**	-.38**	.29*	-.42**	-.59**	.42**
TO						-	-.46**	.24	-.26*	-.29*	.48**
EO							-	.17	.51**	.49**	-.40**
AO								-	-.15	-.10	-.13
Ex									-	.75**	-.21
Cy										-	-.40**
Ef											-

* $p < .05$, ** $p < .01$.

Research Question and Hypotheses

The research question under investigation in this study is whether or not coping styles moderate statistically significant relationships between personality traits and burnout in online doctoral psychology students?

Hypothesis 1. To test the first hypothesis that Task-Oriented coping styles would predict a significant negative correlation between the personality trait of Neuroticism and moderate-to-high levels of burnout in online doctoral psychology students, the correlation matrix (see Table 4) was initially consulted to identify that statistically significant relationships among the variables in question indeed existed. Neuroticism was positively correlated to the burnout domains of Exhaustion ($r_{(N/Ex)} = .555$, $p < .01$) and Cynicism ($r_{(N/Cy)} = .506$, $p < .01$) at statistically significant levels. It was negatively correlated to Task-Oriented coping ($r_{(N/TO)} =$ -.554, $p < .01$), at a statistically significant level, and Professional Efficacy ($r_{(N/Ef)} = -.199$, $p > .05$), although not at a significant level. Next, a regression analysis was run to obtain

the amount of variance accounted for by the predictor and moderator variables with and without interaction (see Table 5). The first model, without the interaction, was significant ($F(2, 64) = 14.493$, $p < .0001$), as was the second model, with the interaction ($F(3, 63) = 9.799$, $p < .0001$). However, the interaction did not account for significantly more variance than without it ($\Delta R^2 = .006$, $p = .443$). No statistically significant moderating effect of Task-Oriented coping on the relationship between Neuroticism and Exhaustion was identified.

The process was then repeated for the possible moderating effects of Task-Oriented coping on the relationship between Neuroticism and the second burnout domain of Cynicism. Again, although the models were both significant ($F(2, 64) = 11.012$, $p < .0001$; $F(3, 63) = 7.253$, $p < .0001$), the interaction did not account for significantly more variance than without it ($\Delta R^2 = .001$, $p = .809$), and it was determined that a moderating effect was not identified.

Finally, the process was followed once more for the possible moderating effects of Task-Oriented coping on the relationship between Neuroticism and the last burnout domain of Efficacy. Results were similar to the first two burnout domains, as the models were both significant ($F(2, 64) = 9.791$, $p < .0001$; ($F(3, 63) = 7.324$, $p < .0001$), but the interaction did not account for a significant change in variance ($\Delta R^2 = .024$, $p = .156$). The results indicated that significant moderation had not occurred.

Table 5

Analysis of Variance of the Interaction Between Neuroticism and Task-Oriented Coping for Burnout Domains

	ANOVA					Change statistics	
Model	*SS*	*df*	*MS*	*F*	*p*	ΔR^2	*p*
Exhaustion (Ex)							
Neuroticism (N)							
Task-Oriented (TO)							
w/o Interaction							
Regression	1037.42	2	518.71	14.49	<.001**	.312	<.001**
Residual	2290.62	64	35.79				
Total	3328.03	66					
w/ Interaction							
Regression	1058.85	3	352.95	9.80	<.001**	.006	.443
Residual	2269.18	63	36.02				
Total	3328.03	66					
Cynicism (Cy)							
Neuroticism (N)							
Task-Oriented (TO)							
w/o Interaction							
Regression	1386.66	2	693.33	11.01	<.001**	.256	<.001**
Residual	4029.52	64	62.96				
Total	5416.18	66					
w/ Interaction							
Regression	1390.43	3	463.48	7.25	<.001**	.001	.809
Residual	4025.75	63	63.90				
Total	5416.18	66					
Efficacy (Ef)							
Neuroticism (N)							
Task-Oriented (TO)							
w/o Interaction							
Regression	788.38	2	394.19	9.79	<.001**	.234	<.001**
Residual	2576.70	64	40.26				
Total	3365.08	66					
w/ Interaction							
Regression	870.13	3	290.04	7.32	<.001**	.024	.156
Residual	2494.94	63	39.60				
Total	3365.08	66					

* $p < .05$, ** $p < .01$.

As the linear regression analyses did not support any statistically significant changes in variance based upon the hypothesized moderator variable, no further exploration into the first hypothesis that Task-Oriented coping styles would predict a significant negative correlation between the personality trait of Neuroticism and moderate-to-high levels of burnout in online doctoral psychology students was warranted; thus, the first null hypothesis failed to be rejected.

Hypothesis 2. To test the second hypothesis that Emotion-Oriented coping styles would predict a significant positive correlation between the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness and moderate to high levels of burnout in online doctoral psychology students, the correlation matrix (see Table 4) was initially consulted to identify that statistically significant relationships among the variables in question indeed existed. Extraversion and Conscientiousness were negatively correlated to Emotion-Oriented coping ($r_{(E/EO)}$ = -.309, p < .05; $r_{(C/EO)}$ = -.383, p < .01), as well as the burnout domains of Exhaustion ($r_{(E/Ex)}$ = -.351, p < .01; $r_{(C/Ex)}$ = -.422, p < .01) and Cynicism ($r_{(E/Cy)}$ = -.373, p < .01; $r_{(C/Cy)}$ = -.586, p < .01) at statistically significant levels; whereas, they were positively correlated to Professional Efficacy ($r_{(E/Ef)}$ = .241, p < .05; $r_{(C/Ef)}$ = .421, p < .01) at a statistically significant level. Openness was positively correlated to Professional Efficacy ($r_{(O/Ef)}$ = .382, p < .01) and negatively correlated to Emotion-Oriented coping ($r_{(O/EO)}$ = -.296, p < .05), both at statistically significant levels. It was also negatively correlated to the burnout domains of Exhaustion ($r_{(O/Ex)}$ = -.015, p > .05) and Cynicism ($r_{(O/Cy)}$ = -.150, p > .05), but not

significantly. Agreeableness followed the same directional patterns as the other three personality traits, but none to a level of statistical significance.

Next, a series of regression analyses were run to determine the percentage of variance accounted for by the predictor and moderator variables with and without interactions (see Tables 6-9). In each analysis, the first model, without the interaction, was statistically significant, as was the second model, with interaction. However, the interaction did not account for significantly more variance than without it. Therefore, it was determined that no statistically significant moderating effect was caused by Emotion-Oriented coping on the relationships between the predictor variables of Extraversion, Agreeableness, Openness, and Conscientiousness, and the criterion variables of Exhaustion, Cynicism, and Professional Efficacy.

As the linear regression analyses did not support any statistically significant changes in variance based upon the hypothesized moderator variable, no further exploration into the second hypothesis that Emotion-Oriented coping styles would predict a significant positive correlation between the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness and moderate-to-high levels of burnout in online doctoral psychology students was warranted. Thus, the second null hypothesis failed to be rejected.

Table 6

Analysis of Variance of the Interaction Between Extraversion and Emotion-Oriented Coping for Burnout Domains

	ANOVA					Change statistics	
Model	*SS*	*df*	*MS*	*F*	*p*	ΔR^2	*p*
Exhaustion (Ex)							
Extraversion (E)							
Emotion-Oriented (EO)							
w/o Interaction							
Regression	1007.47	2	503.74	13.89	<.001**	.303	<.001**
Residual	2320.56	64	36.26				
Total	3328.03	66					
w/ Interaction							
Regression	1007.53	3	335.84	9.12	<.001**	.002	.969
Residual	2320.50	63	36.83				
Total	3328.03	66					
Cynicism (Cy)							
Extraversion (E)							
Emotion-Oriented (EO)							
w/o Interaction							
Regression	1614.39	2	807.19	13.59	<.001**	.298	<.001**
Residual	3801.80	64	59.40				
Total	5416.18	66					
w/ Interaction							
Regression	1616.64	3	538.88	8.94	<.001**	.000	.847
Residual	3799.54	63	60.31				
Total	5416.18	66					
Efficacy (Ef)							
Extraversion (E)							
Emotion-Oriented (EO)							
w/o Interaction							
Regression	591.05	2	295.52	6.82	.002**	.176	.002**
Residual	2774.03	64	43.34				
Total	3365.08	66					
w/ Interaction							
Regression	594.37	3	198.12	4.51	.006**	.001	.784
Residual	2770.71	63	43.98				
Total	3365.08	66					

* $p < .05$, ** $p < .01$.

Table 7

Analysis of Variance of the Interaction Between Openness and Emotion-Oriented Coping for Burnout Domains

	ANOVA					Change statistics	
Model	*SS*	*df*	*MS*	*F*	*p*	ΔR^2	*p*
Exhaustion (Ex)							
Openness (O)							
Emotion-Oriented (EO)							
w/o Interaction							
Regression	937.74	2	468.87	12.55	<.001**	.282	<.001**
Residual	2390.29	64	37.35				
Total	3328.03	66					
w/ Interaction							
Regression	977.80	3	325.93	8.74	<.001**	.012	.304
Residual	2350.23	63	37.31				
Total	3328.03	66					
Cynicism (Cy)							
Openness (O)							
Emotion-Oriented (EO)							
w/o Interaction							
Regression	1324.01	2	662.01	10.35	<.001**	.244	<.001**
Residual	4092.17	64	63.94				
Total	5416.18	66					
w/ Interaction							
Regression	1356.04	3	452.01	7.01	<.001**	.006	.483
Residual	4060.14	63	64.45				
Total	5416.18	66					
Efficacy (Ef)							
Openness (O)							
Emotion-Oriented (EO)							
w/o Interaction							
Regression	795.01	2	397.65	9.90	<.001**	.236	<.001**
Residual	2569.77	64	40.15				
Total	3365.08	66					
w/ Interaction							
Regression	806.78	3	268.69	6.62	.001**	.003	.608
Residual	2559.00	63	40.62				
Total	3365.08	66					

* $p < .05$, ** $p < .01$.

Table 8

Analysis of Variance of the Interaction Between Agreeableness and Emotion-Oriented Coping for Burnout Domains

	ANOVA					Change statistics	
Model	*SS*	*df*	*MS*	*F*	*p*	ΔR^2	*p*
Exhaustion (Ex)							
Agreeableness (A)							
Emotion-Oriented (EO)							
w/o Interaction							
Regression	948.28	2	474.14	12.75	<.001**	.285	<.001**
Residual	2379.75	64	37.19				
Total	3328.03	66					
w/ Interaction							
Regression	1056.80	3	352.27	9.78	<.001**	.033	.088
Residual	2271.23	63	36.05				
Total	3328.03	66					
Cynicism (Cy)							
Agreeableness (A)							
Emotion-Oriented (EO)							
w/o Interaction							
Regression	1452.04	2	726.02	11.72	<.001**	.268	<.001**
Residual	3964.14	64	61.94				
Total	5416.18	66					
w/ Interaction							
Regression	1585.51	3	528.50	8.69	<.001**	.025	.143
Residual	3830.67	63	60.80				
Total	5416.18	66					
Efficacy (Ef)							
Agreeableness (A)							
Emotion-Oriented (EO)							
w/o Interaction							
Regression	569.36	2	284.68	6.52	.003**	.169	.003**
Residual	2795.71	64	43.68				
Total	3365.08	66					
w/ Interaction							
Regression	570.57	3	190.19	4.29	.008**	.000	.869
Residual	2794.50	63	44.36				
Total	3365.08	66					

* $p < .05$, ** $p < .01$.

Table 9

Analysis of Variance of the Interaction Between Conscientiousness and Emotion-Oriented Coping for Burnout Domains

	ANOVA					Change statistics	
Model	*SS*	*df*	*MS*	*F*	*p*	ΔR^2	*p*
Exhaustion (Ex)							
Conscientiousness (C)							
Emotion-Oriented (EO)							
w/o Interaction							
Regression	1068.46	2	534.23	15.13	<.001**	.321	<.001**
Residual	2259.57	64	35.31				
Total	3328.03	66					
w/ Interaction							
Regression	1068.62	3	356.21	9.93	<.001**	.000	.948
Residual	2259.41	63	35.86				
Total	3328.03	66					
Cynicism (Cy)							
Conscientiousness (C)							
Emotion-Oriented (EO)							
w/o Interaction							
Regression	2323.07	2	1161.54	24.03	<.001**	.429	<.001**
Residual	3093.11	64	48.33				
Total	5416.18	66					
w/ Interaction							
Regression	2326.02	3	775.34	15.81	<.001**	.001	.807
Residual	3090.16	63	49.05				
Total	5416.18	66					
Efficacy (Ef)							
Conscientiousness (C)							
Emotion-Oriented (EO)							
w/o Interaction							
Regression	821.53	2	410.77	10.34	<.001**	.244	<.001**
Residual	2543.55	64	39.74				
Total	3365.08	66					
w/ Interaction							
Regression	856.28	3	285.43	7.17	<.001**	.010	.354
Residual	2508.79	63	39.82				
Total	3365.08	66					

* $p < .05$, ** $p < .01$.

Hypothesis 3. To test the third hypothesis that Avoidant-Oriented coping styles would predict a significant positive correlation between the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness and moderate to high levels of burnout in online doctoral psychology students, the correlation matrix (see Table 4) was initially consulted to identify that statistically significant relationships among the variables in question indeed existed. Extraversion, Agreeableness, and Conscientiousness were all positively correlated with Avoidant-Oriented coping ($r_{(E/AO)}$ = .114, $p > .05$; $r_{(A/AO)}$ = .263, $p < .05$; $r_{(C/AO)}$ = .286, $p < .05$); however, Openness ($r_{(O/AO)}$ = -.260, $p > .05$) was negatively correlated with it. All of the personality traits were negatively correlated with the burnout domains of Exhaustion ($r_{(E/Ex)}$ = -.351, $p > .01$; $r_{(O/Ex)}$ = -.015, $p > .05$; $r_{(A/Ex)}$ = -.173, $p > .05$; $r_{(C/Ex)}$ = -.422, $p < .01$) and Cynicism ($r_{(E/Cy)}$ = -.373, $p > .01$; $r_{(O/Cy)}$ = -.150, $p > .05$; $r_{(A/Cy)}$ = -.172, $p > .05$; $r_{(C/Cy)}$ = -.586, $p < .01$), and positively correlated with Professional Efficacy ($r_{(E/Ef)}$ = .241, $p > .05$; $r_{(O/Ef)}$ = .382, $p < .01$; $r_{(A/Ef)}$ = .108, $p > .05$; $r_{(C/Ef)}$ = .421, $p < .01$), to varying statistical significance.

Next, a series of regression analyses were run to obtain the amounts of variance accounted for by the predictor and moderator variables with and without interactions (see Tables 10-13). None of the analyses including Agreeableness as the predictor variable were statistically significant. Using Extraversion and Openness as predictors, the only significant results indicated that there was some regression occurring both with and without interaction. However, there were not significant changes in the levels of variance for the interaction models over the non-interaction models. For the predictor personality trait of Conscientiousness, significant regression occurred both with and without

interaction. Additionally, the change in variance between the interaction of Conscientiousness and Avoidant-Oriented coping over the non-interaction model was found to be statistically significant for the burnout domain of Professional Efficacy ($\Delta R^2 = .137$, $\Delta F(1, 63) = .137$, $p < .001$, $b = -.0295$, $t(63) = -2.67$, $p < .01$).

In order to determine the extent to which Avoidant-Oriented coping styles affect the relationship between the personality trait of Conscientiousness and the burnout domain of Professional Efficacy in the sample population, the simple of effect was measured at the 10^{th}, 25^{th}, 50^{th}, 75^{th}, and 90^{th} percentiles using the Johnson-Neyman technique. Examination of the interaction plot showed an antagonistic effect; as Avoidant-Oriented coping increased, the positive relationship between Conscientiousness and Professional Efficacy changed to a negative relationship. As a low score on the burnout domain of Professional Efficacy indicates high levels of burnout (reverse scoring), these findings suggest a that Avoidance-Oriented coping styles predict a positive correlation between the personality trait of Conscientiousness and moderate to high levels of burnout in online doctoral psychology students; thus, the third null hypothesis can be rejected.

Table 10

Analysis of Variance of the Interaction Between Extraversion and Avoidance-Oriented Coping for Burnout Domains

	ANOVA					Change statistics	
Model	*SS*	*df*	*MS*	*F*	*p*	ΔR^2	*p*
Exhaustion (Ex)							
Extraversion (E)							
Avoidance-Oriented (AO)							
w/o Interaction							
Regression	448.61	2	224.30	4.99	.010**	.135	.010**
Residual	2879.42	64	44.99				
Total	3328.03	66					
w/ Interaction							
Regression	460.41	3	153.47	3.37	.024*	.004	.612
Residual	2867.62	63	45.52				
Total	3328.03	66					
Cynicism (Cy)							
Extraversion (E)							
Avoidance-Oriented (AO)							
w/o Interaction							
Regression	772.96	2	386.48	5.33	.007**	.143	.007**
Residual	4643.22	64	72.55				
Total	5416.18	66					
w/ Interaction							
Regression	785.18	3	261.73	3.56	.019**	.002	.685
Residual	4631.00	63	73.51				
Total	5416.18	66					
Efficacy (Ef)							
Extraversion (E)							
Avoidance-Oriented (AO)							
w/o Interaction							
Regression	281.23	2	140.61	2.92	.061	.084	.061
Residual	3083.85	64	48.19				
Total	3365.08	66					
w/ Interaction							
Regression	490.60	3	163.53	3.58	.019**	.062	.036*
Residual	2874.48	63	45.63				
Total	3365.08	66					

* $p < .05$, ** $p < .01$.

Table 11

Analysis of Variance of the Interaction Between Openness and Avoidance-Oriented Coping for Burnout Domains

	ANOVA					Change statistics	
Model	*SS*	*df*	*MS*	*F*	*p*	ΔR^2	*p*
Exhaustion (Ex)							
Openness (O) Avoidance-Oriented (AO)							
w/o Interaction							
Regression	80.50	2	40.25	.79	.457	.024	.457
Residual	3247.54	64	50.74				
Total	3328.03	66					
w/ Interaction							
Regression	86.12	3	28.71	.558	.645	.002	.742
Residual	3241.92	63	51.46				
Total	3328.03	66					
Cynicism (Cy)							
Openness (O) Avoidance-Oriented (AO)							
w/o Interaction							
Regression	237.81	2	118.90	1.47	.238	.044	.238
Residual	5178.37	64	80.91				
Total	5416.18	66					
w/ Interaction							
Regression	238.05	3	79.35	.97	.415	.000	.957
Residual	5178.13	63	82.19				
Total	5416.18	66					
Efficacy (Ef)							
Openness (O) Avoidance-Oriented (AO)							
w/o Interaction							
Regression	493.66	2	246.83	5.50	.006**	.147	.006**
Residual	2871.42	64	44.87				
Total	3365.08	66					
w/ Interaction							
Regression	599.39	3	199.80	4.55	.006**	.031	.126
Residual	2765.69	63	43.90				
Total	3365.08	66					

* $p < .05$, ** $p < .01$.

Table 12

Analysis of Variance of the Interaction Between Agreeableness and Avoidance-Oriented Coping for Burnout Domains

	ANOVA					Change statistics	
Model	*SS*	*df*	*MS*	*F*	*p*	ΔR^2	*p*
Exhaustion (Ex)							
Agreeableness (A)							
Avoidance-Oriented (AO)							
w/o Interaction							
Regression	135.30	2	67.65	1.36	.265	.041	.265
Residual	3192.73	64	49.89				
Total	3328.03	66					
w/ Interaction							
Regression	142.72	3	47.58	.94	.426	.002	.703
Residual	3185.31	63	50.56				
Total	3328.03	66					
Cynicism (Cy)							
Agreeableness (A)							
Avoidance-Oriented (AO)							
w/o Interaction							
Regression	179.66	2	89.83	1.10	.340	.033	.340
Residual	5236.52	64	81.82				
Total	5416.18	66					
w/ Interaction							
Regression	180.22	3	60.07	.72	.542	.000	.935
Residual	5235.96	63	83.11				
Total	5416.18	66					
Efficacy (Ef)							
Agreeableness (A)							
Avoidance-Oriented (AO)							
w/o Interaction							
Regression	131.82	2	65.91	1.31	.278	.039	.278
Residual	3233.26	64	50.52				
Total	3365.08	66					
w/ Interaction							
Regression	295.57	3	98.52	2.02	.120	.049	.071
Residual	3069.51	63	48.72				
Total	3365.08	66					

* $p < .05$, ** $p < .01$.

Table 13

Analysis of Variance of the Interaction Between Conscientiousness and Avoidance-Oriented Coping for Burnout Domains

	ANOVA					Change statistics	
Model	*SS*	*df*	*MS*	*F*	*p*	ΔR^2	*p*
Exhaustion (Ex)							
Conscientiousness (C) Avoidance-Oriented (AO)							
w/o Interaction							
Regression	594.06	2	297.03	6.96	.002**	.179	.002**
Residual	2733.97	64	42.72				
Total	3328.03	66					
w/ Interaction							
Regression	596.03	3	198.68	4.58	.006**	.001	.832
Residual	2732.00	63	43.67				
Total	3328.03	66					
Cynicism (Cy)							
Conscientiousness (C) Avoidance-Oriented (AO)							
w/o Interaction							
Regression	1885.84	2	942.92	17.09	<.001**	.348	<.001**
Residual	3530.35	64	55.16				
Total	5416.18	66					
w/ Interaction							
Regression	1931.05	3	643.68	11.64	<.001**	.008	.369
Residual	3485.13	63	55.32				
Total	5416.18	66					
Efficacy (Ef)							
Conscientiousness (C) Avoidance-Oriented (AO)							
w/o Interaction							
Regression	827.78	2	413.89	10.44	<.001**	.246	<.001**
Residual	2537.29	64	39.65				
Total	3365.08	66					
w/ Interaction							
Regression	1289.30	3	429.77	13.04	<.001**	.137	<.001**
Residual	2075.77	63	32.95				
Total	3365.08	66					

* $p < .05$, ** $p < .01$.

Summary

The statistical analyses conducted with the sample data for this study, and presented in this chapter, failed to support rejection of the first and second null hypotheses, which stated that Task-Oriented and Emotion-Oriented coping styles would not moderate the relationships between the personality traits of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness and moderate to high burnout levels. However, the third null hypothesis was rejected, as findings supported the hypothesis that Avoidance-Oriented coping styles predicted a positive correlation between the personality trait of Conscientiousness and moderate to high levels of burnout in online doctoral psychology students. Chapter 5 will include a discussion of the findings presented above.

Chapter 5: Discussion

Introduction

The purpose of this study was to contribute toward filling a gap in research by examining the relation among personality traits, coping styles, and burnout levels in online doctoral psychology students. In an effort to address the problem of high attrition rates and prolonged completion times in online doctoral psychology students, this quantitative survey study was designed to investigate the possible moderating effects of coping styles on the predicted relationships between personality traits and burnout symptoms. The findings of this study may serve students, faculty, and universities by indicating a need to implement strategies to assess for burnout potential and occurrence, as well as establishing the need for interventions that may decrease burnout symptoms, thereby improving completion rates and decreasing attrition rates for online doctoral psychology students.

This study used a cross-sectional survey methodology to collect quantitative data related to the independent variable of personality traits, the dependent variable of burnout level, and the moderating variable of coping styles. Substantial research has established significant relationships between personality traits and burnout. However, as personality traits are relatively stable in nature, another more malleable factor would be required to develop interventions for burnout. Therefore, this study assessed coping styles, which can be learned, as a moderating variable. Simple and multiple regression analyses were used to examine relationships among the variables. If the results of this research had supported the hypothesized predictive relationships between personality traits, coping

styles, and burnout symptoms exist in online doctoral psychology students, they could have served as rationale for the implementation of prevention and intervention strategies using learned coping skills to combat burnout, as well as the associated problems of attrition and prolonged completion times.

This study did not support the hypothesis that Task-Oriented coping styles would significantly moderate the positive relationship between the personality trait of Neuroticism and moderate to high levels of burnout in online doctoral psychology students. Furthermore, it did not support the hypothesis that Emotion-Oriented coping styles would significantly moderate the negative relationship between the personality traits of Extraversion, Openness, Agreeableness, and Conscientiousness. However, there was support for the hypothesis that Avoidance-Oriented coping styles would predict a positive correlation between the personality trait of Conscientiousness and moderate to high levels of burnout in online doctoral psychology students.

Interpretation of the Findings

Personality and Burnout

The findings of this study confirmed those of other researchers (Alarcon, Eschleman, & Bowling, 2009; Chung & Harding, 2009; Ghorpade, Lackritz, & Singh, 2011; Hochwalder, 2009; Lent & Schwartz, 2012; Morgan & de Bruin, 2010; Narumoto et al., 2008; Salami, 2011) in that the personality trait of Neuroticism was positively correlated with the burnout domains of Exhaustion and Cynicism. Using regression analysis, it was found that Neuroticism predicted 30% of the variance in Exhaustion and 25% of the variance in Cynicism. Although Neuroticism was negatively correlated with

Professional Efficacy, it was not to a statistically significant degree. These results indicate that people who tend to score highly on the personality trait of Neuroticism are also likely to report high levels of burnout, specifically high levels of Emotional Exhaustion and Cynicism/Depersonalization and low levels of Professional Efficacy/Personal Accomplishment. These findings support those of Ghorpade, Lackritz, and Singh (2011), Lent and Schwartz (2012), Morgan and de Bruin (2010), and Salami (2011), all of which reported similar patterns.

The personality traits of Extraversion, Openness, Agreeableness, and Conscientiousness were negatively correlated with the burnout domains of Exhaustion and Cynicism, and positively correlated with Professional Efficacy, at varying levels of statistical significance. When combined, they predicted 18% of the variance in Exhaustion, 35% of the variance in Cynicism, and 26% of the variance in Professional Efficacy. The statistically significant relationships included Extraversion and Conscientiousness predicting 11% and 17% of the variance in Exhaustion, 13% and 33% of the variance in Cynicism, and 4% and 16% of the variance in Professional Efficacy. Openness also predicted 13% of the variance in Professional Efficacy, but not to a statistically significant level. These results indicate that people who tend to score highly on the personality traits of Extraversion, Openness, Agreeableness, and Conscientiousness are also likely to report low levels of burnout, specifically low levels of Emotional Exhaustion and Cynicism/Depersonalization and high levels of Professional Efficacy/Personal Accomplishment. These findings support those of Ghorpade, Lackritz, and Singh (2011), Lent and Schwartz (2012), Morgan and de Bruin (2010), and Salami

(2011), in that most studies also reported negative relationships between the personality traits of Extraversion and Conscientiousness and the burnout domains of Emotional Exhaustion and Cynicism/Depersonalization, and positive relationships between those personality traits and the burnout domain of Professional Efficacy/Personal Accomplishment. Although these studies also reported significant negative relationships between Agreeableness and the burnout domains of Emotional Exhaustion and Cynicism/Depersonalization, the level of significance was not reached in this study. The lack of support for the personality trait of Openness as a significant predictor of burnout found in this study was, however, mirrored in the literature review with the exception of Salami (2011), who reported a significant negative relationship between Openness and both Emotional Exhaustion and Cynicism/Depersonalization.

Personality and Coping

The findings of this study also confirmed those of other researchers (Burgess, Irvine, & Wallymahmed, 2010; Hambrick & McCord, 2010; Narumoto et al., 2008) in that the personality trait of Neuroticism had a negative correlation with the Task-Oriented coping style and a positive correlation with the Emotion-Oriented coping style. Regression analysis revealed that Neuroticism predicted 30% of the variance in Task-Oriented coping and 53% of the variance in Emotion-Oriented coping. Neuroticism was not significantly correlated to Avoidant-Oriented coping, however. These results suggest that people who score highly on the personality trait of Neuroticism tend to employ Emotion-Oriented coping styles rather than Task-Oriented coping styles. Furthermore, they confirm the findings of Burgess, Irvine, and Wallymahmed (2010), which showed

that the personality trait of Neuroticism was routinely associated with emotion-focused coping styles, as well as the findings of Hambrick and McCord (2010), who found that those who scored high on the personality trait of Neuroticism were significantly less likely to use proactive coping techniques, although they were not found to be any more likely to use avoidance-oriented techniques.

The personality traits of Extraversion, Openness, Agreeableness, and Conscientiousness were positively correlated with the Task-Oriented coping style and negatively correlated with the Emotion-Oriented coping style. Extraversion, Agreeableness, and Conscientiousness were also positively correlated with the Avoidant-Oriented coping style, whereas Openness was negatively correlated. When combined, they predicted 48% of the variance in Task-Oriented coping, 25% of the variance in Emotion-Oriented coping, and 15% of the variance in Avoidant-Oriented coping. However, the statistically significant relationships included the following: Extraversion, Openness, Agreeableness, and Conscientiousness predicting 20%, 11%, 17%, and 32% of the variance in Task-Oriented coping; Extraversion, Openness, and Conscientiousness predicting 8%, 7%, and 13% of the variance in Emotion-Oriented coping; and Openness, Agreeableness, and Conscientiousness predicting 5%, 6%, and 7% of the variance in Avoidant-Oriented coping. These results suggest that people who score highly on the personality traits of Extraversion, Openness, Agreeableness, and Conscientiousness tend to employ Task-Oriented coping styles, and to a lesser degree Avoidant-Oriented, rather than Emotion-Oriented coping styles. These results confirm those of Burgess, Irvine, and Wallymahmed (2010), who reported that the personality traits of Openness,

Conscientiousness, and Agreeableness were positively correlated with problem-focused coping styles, and those of Hambrick and McCord (2010), who identified positive relationships between Extraversion, Agreeableness, and Conscientiousness and proactive coping techniques, with special emphasis on task-oriented coping.

Coping and Burnout

Finally, the findings of this study confirmed those of other researchers (Isaksson Ro et al., 2010; Narumoto et al., 2008; Wallace, Lee, & Lee, 2010) in that the Task-Oriented coping style had a negative correlation with the burnout domains of Exhaustion and Cynicism, and a positive correlation with Professional Efficacy. Regression analysis revealed that Task-Oriented coping predicted 5% of the variance in Exhaustion, 7% variance in Cynicism, and 22% of the variance in Professional Efficacy. These results suggest that online psychology PhD program students who employ a Task-Oriented coping style are more likely to report low levels of burnout, specifically low levels of Emotional Exhaustion and Cynicism/Depersonalization and high levels of Professional Efficacy/Personal Accomplishment.

The Emotion-Oriented coping style had a positive correlation with the burnout domains of Exhaustion and Cynicism, and a negative correlation with Professional Efficacy. Regression analysis revealed that Emotion-Oriented coping predicted 25% of the variance in Exhaustion, 23% variance in Cynicism, and 15% of the variance in Professional Efficacy. These results suggest that online graduate students who employ an Emotion-Oriented coping style are more likely to report high levels of burnout,

specifically high levels of Emotional Exhaustion and Cynicism/Depersonalization and low levels of Professional Efficacy/Personal Accomplishment.

The Avoidance-oriented coping style was not significantly correlated with any of the burnout domains, as it was in the research conducted by Wallace, Lee, and Lee (2010). These results suggest that Avoidance-Oriented coping alone does not predict specific levels of burnout, but that it may serve as a moderating factor, especially when combined with personality traits that indicate predicted relationships with burnout.

Personality, Coping, and Burnout

Employing Baron and Kenny's (1986) moderation model, this study assessed how coping styles influenced the effect that personality traits had on burnout by changing either or both the direction and strength of those relationships. A series of multiple regression analyses were conducted with all combinations of personality traits (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness), coping styles (Task-Oriented, Emotion-Oriented, and Avoidant-Oriented), and burnout domains (Exhaustion, Cynicism, and Professional Efficacy). The only significant moderation found was that as Avoidant-Oriented coping increased, the positive relationship between Conscientiousness and Professional Efficacy changed from a positive relationship to a negative relationship. As a low score on the burnout domain of Professional Efficacy indicates high levels of burnout (reverse scoring), these findings suggest that Avoidance-Oriented coping styles predict a positive correlation between the personality trait of Conscientiousness and moderate to high levels of burnout in online doctoral psychology students. Based upon these results, it can be asserted that students who score highly on

the personality trait of Conscientiousness may mitigate their potential for burnout if they learn to use coping styles other than those classified as Avoidant-Oriented.

Limitations of the Study

Although the subjects vary in demographic characteristics such as gender, age, nationality, ethnicity, and geographical location, the sample population consisted primarily of females (92.5%) aged 40 to 49 years (52.2%) who identified as being white in race (77.6%), and who were recruited from one online university, thus limiting the generalizability of the findings to similar students from this online university and possibly skewing the results of the study. Furthermore, due to the self-report design of the survey instruments utilized in this study, the validity of the measures may be hindered by research participants' personal subjectivity. Such inaccuracies could be either intentional and due to a reluctance to be perceived in a certain light, or unintentional and simply based upon varying moods or personal understanding. Study volunteers were recruited via one online university's participant pool, thereby limiting advertisement of the study to those students who accessed this area of the university's research department. Moreover, although enrollment in an online doctoral psychology program was a stated requirement to participation in the study, the anonymous nature of the design relied upon the assumption that participants were indeed enrolled in such programs, as the participant pool was open to all students of the aforementioned university. Finally, although the results of this study supported those of previous research, the mean differences between the sample and the published norms for the instruments utilized were statistically significant for all but two domains, which may have skewed the results of this research.

Recommendations

As this study supported the predictive relationships between personality traits and burnout, coping styles and burnout, and personality traits and coping styles, it is suggested that further research explore these relationships. There may be significant moderating relationships identified among the variables in this study when explored in a larger or more varied sample. It should be noted that the participants in this study scored only in the low to moderate range on the Task-Oriented Coping Style variable and only in the moderate to high range on the Emotion-Oriented Coping Style variable. Both of these factors may indicate a skewed sample, or may be indicative of the larger population of online doctoral psychology students, but warrant further research.

Conversely, it may be that coping styles are simply another predictor variable for burnout; and, thus other factors that are closely related to these variables should be explored in order to identify those that can moderate the predicted patterns between both personality traits and coping styles, and burnout. One suggestion is to explore the effects of environmental variables such as demands, resources, constraints, and time on the relationships among personality traits, coping styles, and burnout. Environment and personality are proposed by Lazarus and Folkman's (1987) Transactional Theory of Appraisal and Coping (see Chapter 1) as being the two areas that determine an individual's appraisal, or subjective evaluation of an event, and coping, or manner of reacting to that event. Therefore, it is recommended that broader study that focuses on personal, academic, and/or professional environmental factors be considered for future research. Personal environmental variables that might affect burnout include partner

status, child-rearing status, social support system, and socio-economic status. Academic and environmental variables might include class venue (e.g., online versus in person), class size, and satisfaction with program. Finally, professional environmental variables might include workload, seniority, salary/compensation, benefits, schedule flexibility, and approachability of management.

Implications for Social Change

This study has contributed to the literature by filling a gap regarding the moderating effects of coping styles on the predictive relationships between personality traits and burnout in online doctoral psychology students. Although this study provided little support for coping styles as moderating factors, it did reinforce that the predictive relationships among personality traits, coping styles, and burnout warrant further exploration. The identification of factors that may affect the potential for burnout symptoms in online doctoral psychology students may allow for the implementation of prevention and intervention programs to combat the development of such symptoms. Discovery of a moderating variable that can prevent or reduce burnout might lead to the development of interventions to assist students, faculty, and universities with timely completion of online academic programs. Furthermore, establishing methods by which students can possibly lower their likelihood of developing burnout symptoms may also benefit them in their ensuing high-stress careers. Based upon the results of this study, it can be asserted that students who score highly on the personality trait of Conscientiousness may mitigate their potential for burnout if they learn to use coping styles other than those classified as Avoidant-Oriented. It is recommended that further

research be conducted in this area, as well as focusing on environmental variables that may mitigate burnout.

Conclusion

Completion times for doctoral students in the field of psychology are twice as long as those of other disciplines, and the attrition rate is over half of the matriculated students (CGS, 2010). Research indicates a relevant correlation between burnout and delayed completion and/or attrition (Deary et al., 2003; Golde, 2005; Ehrenberg et al., 2007; Schaufeli et al., 2002). A review of the literature also reveals that people who score high on the personality trait of Neuroticism tend to use emotional or avoidant coping and tend to experience moderate to high levels of burnout. Conversely, people who score high on the personality traits of Extraversion, Agreeableness, Openness, and Conscientiousness tend to experience low levels of burnout and tend to use task-oriented coping (Alarcon, Eschleman, & Bowling, 2009; Burgess, Irvine, & Wallymahmed, 2010; Chung & Harding, 2009; Ghorpade, Lackritz, & Singh, 2011; Hambrick & McCord, 2010; Hochwalder, 2009; Isaksson Ro et al., 2010; Lent & Schwartz, 2012; Salami, 2011; Morgan & de Bruin, 2010; Wallace, Lee, & Lee, 2010). However, the moderating effects of coping styles on the relationship between personality traits and burnout symptoms have not been thoroughly explored. As personality traits are not generally malleable, prevention/intervention strategies to combat the development of burnout symptoms must focus on techniques that can be manipulated. Coping styles, in contrast, are learned behavior, and thus it follows that this area may be further explored as a means of reducing burnout symptoms. The problem investigated in this study was how coping

styles might moderate the predictive relationships between personality styles and levels of burnout in online doctoral psychology students.

Although the results of this study did not support most coping styles as moderating variables, it did support the hypothesis that Avoidant-Oriented coping styles changed the relationship between the personality trait of Conscientiousness and Professional Efficacy from positive to negative. Furthermore, it did support the predictive relationships among personality traits and burnout, coping styles and burnout, and personality traits and coping styles. It is therefore recommended that further research be conducted to continue exploration into these variables and others that are closely related to them in order to discover a potentially moderating variable which can interrupt the predicted cycles which lead to burnout.

References

Adams, J. S. (1970). Recent developments in equity theory: An examination of theory, research, and relevance to current social problems [Monograph]. *Proceedings of the 78th Annual Convention of the American Psychological Association, 875.*

Alarcon, G., Eschleman, K. J., & Bowling, N. A. (2009). Relationships between personality variables and burnout: A meta-analysis. *Work & Stress, 23*(3), 244-263. doi:10.1080/02678370903282600

Allen, I. E., & Seaman, J. (2008). *Staying the course: Online education in the United States, 2008*. Retrieved June 12, 2009, from http://www.sloan-c.org/publications/survey/staying_course

Allen, I. E., & Seaman, J. (2011). *Going the distance: Online education in the United States, 2011*. Babson Park, MA: Babson Survey Research Group.

Allen, I. E., & Seaman, J. (2013). *Changing course: Ten years of tracking online education in the United States*. Babson Park, MA: Babson Survey Research Group.

Allport, F. H., & Allport, G. W. (1921). Personality traits: Their classification and measurement. *Journal of Abnormal Psychology, 16*(1), 6-40. doi:10.1037/h0069790

Allport, G. W. (1927). Concepts of trait and personality. *Psychological Bulletin, 24*(5), 284-293. doi:10.1037/h0073629

Allport, G. W. (1937). *Personality: A psychological interpretation*. New York, NY: Henry Holt.

Anagnostopoulos, F., & Niakas, D. (2010). Job burnout, health-related quality of life, and sickness absence in Greek health professionals. *European Psychologist, 15*(2), 132-141. doi:10.1027/1016-9040/a000013

Armon, G., Melamed, S., Shirom, A., & Shapira, I. (2010). Elevated burnout predicts the onset of musculoskeletal pain among apparently healthy employees. *Journal of Occupational Health Psychology, 15*(4), 399-408. doi:10.1037/a0020726

Baker, E. K. (2003). *Caring for ourselves: A therapist's guide to personal and professional well-being.* Washington, DC: American Psychological Association. doi:10.1037/10482-000

Barnett, J. E., Baker, E. K., Elman, N. S., & Schoener, G. R. (2007). In pursuit of wellness: The self-care imperative. *Professional Psychology: Research and Practice, 38*(6), 603-612. doi:10.1037/0735-7028.38.6.603

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Beehr, T. A., Bowling, N. A., & Bennett, M. M. (2010). Occupational stress and failures of social support: When helping hurts. *Journal of Occupational Health Psychology, 15*(1), 45-59. doi:10.1037/a0018234

Benson, H., Beary, J. F., & Carol, M. P. (1974). The relaxation response. *Psychiatry, 37*, 37-46.

Billings, A. G., & Moos, R. H. (1981). The role of coping responses and social resources in attenuating the impact of stressful life events. *Journal of Behavioral Medicine, 4*, 139-157.

Botwin, M. D. (1995). Review of the NEO Personality Inventory 3. In J. C. Conoley & J. C. Impara (Eds.), *The twelfth mental measurements yearbook* [electronic version]. Retrieved from the Burros Institute's Mental Measurements Yearbook online database.

Bowling, N. A., & Eschleman, K. J. (2010). Employee personality as a moderator of the relationships between work stressors and counterproductive work behavior. *Journal of Occupational Health Psychology, 15*(1), 91-103. doi:10.1037/a0017326

Bughi, S. A., Sumcad, J., & Bughu, S. (2006). Effect of brief behavioral intervention program in managing stress in medical students from two Southern California universities. *Medical Education Online, 11*, 1-8. doi:10.3402/meo.v11i.4593

Burgess, L., Irvine, F., & Wallymahmed, A. (2010). Personality, stress, and coping in intensive care nurses: A descriptive exploratory study. *Nursing in Critical Care, 15*(3), 129-140.

Cattell, R. B. (1945). The principal trait clusters for describing personality. *Psychological Bulletin, 42*(3), 129-161. doi:10.1037/h0060679

Cattell, R. B., Cattell, A. K., & Cattell, H. E. (1993). *Sixteen personality factor questionnaire* (5th ed.). Champaign, IL: Institute for Personality and Ability Testing.

Chung, M. C., & Harding, C. (2009). Investigating burnout and psychological well-being of staff working with people with intellectual disabilities and challenging behaviour: The role of personality. *Journal of Applied Research in Intellectual Disabilities, 22*(6), 549-560. doi:10.1111/j.1468-3148.2009.00507.x

Cobb, S. C. (2004). Internet continuing education for health care professionals: An integrative review. *The Journal of Continuing Education in the Health Professions, 24*(3), 171-180. doi:10.1002/chp.1340240308

Costa, P. T., Jr., & McCrae, R. R. (1985). *The NEO Personality Inventory Manual*. Odessa, FL: Psychological Assessment Resources.

Council of Graduate Schools. (2010). *PhD completion and attrition: Policies and practices to promote student success*. Washington, DC: Author.

De Vente, W., Kamphuis, J. H., Emmelkamp, P. M. G., & Blonk, R. W. B. (2008). Individual and group cognitive-behavioral treatment for work-related stress complaints and sickness absence: A randomized controlled trial. *Journal of Occupational Health Psychology, 13*(3), 214-231. doi:10.1037/1076-8998.13.3.214

Deary, I. J., Watson, R., & Hogston, R. (2003). A longitudinal cohort study of burnout and attrition in nursing students. *Journal of Advanced Nursing, 43*(1), 71-81. doi:10.1046/j.1365-2648.2003.02674.x

Di Pierro, M. (2007). Excellence in doctoral education: Defining best practices. *College Student Journal, 41*(2), 368-375.

Ehrenberg, R. G., Jakubson, G. H., Groen, J. A., So, E., & Price, J. (2007). Inside the black box of doctoral education: What program characteristics influence doctoral students' attrition and graduation probabilities? *Educational Evaluation and Policy Analysis, 29*(2), 134-150. doi:10.3102/0162373707301707

Endler, N. S., & Parker, J. D. (1990a). *Coping Inventory for Stressful Situations (CISS): Manual*. Toronto: Multi-Health Systems.

Endler, N. S., & Parker, J. D. (1990b). Multidimensional assessment of coping: A critical evaluation. *Journal of Personality and Social Psychology, 58*(5), 844-854.

Eysenck, H. J. (1952). The organization of personality. In D. Krech & G. S. Klein (Eds.), *Theoretical models and personality theory.* (pp. 101-117). Durham, NC: Duke University Press.

Fitzpatrick, R. (2005). Review of the Maslach Burnout Inventory, 3rd Edition. In R. A. Spies and B. S. Plake (Eds.), *The sixteenth mental measurements yearbook* [electronic version]. Retrieved from the Burros Institute's Mental Measurements Yearbook online database.

Folkman, S., & Lazarus, R. S. (1988). *Manual for the Ways of Coping Questionnaire*. Palo Alto, CA: Consulting Psychologists Press.

French, J. R. P., Jr., & Kahn, R. L. (1962). A programmatic approach to studying the industrial environment and mental health. *Journal of Social Issues, 18*(3), 1-47. doi:10.1111/j.1540-4560.1962.tb00415.x

Freudenberger, H. J. (1974). Staff burn-out. *Journal of Social Issues, 30*(1), 159-165. doi:10.1111/j.1540-4560.1974.tb00706.x

Ghorpade, J., Lackritz, J., & Singh, G. (2011). Personality as a moderator of the relationship between role conflict, role ambiguity, and burnout. *Journal of Applied Social Psychology, 41*(6), 1275-1298. doi:10.1111/j.1559-1816.2011.00763x

Goldberg, L. R. (1981). Language and individual differences: The search for universals in personality lexicons. In L. Wheeler (Ed.), *Review of personality and social psychology (Vol. 2)*, pp. 141-165. Beverly Hills, CA: Sage.

Golde, C. M. (2005). The role of the department and discipline in doctoral student attrition: Lessons from four departments. *Journal of Higher Education, 76*(6), 669-700. doi:10.1353/jhe.2005.0039

Grant, A. M., & Campbell, E. M. (2007). Doing good, doing harm, being well, and burning out: The interactions of perceived prosocial and antisocial impact in service work. *Journal of Occupational and Organizational Psychology, 80*(4), 665-691. doi:10.1348/096317906X169553

Ferguson, C. J. (2010). A meta-analysis of normal and disordered personality across the life span. *Journal of Personality and Social Psychology, 98*(4), 659-667.

Halbesleben, J. R. B., & Buckley, M. R. (2004). Pluralistic ignorance: Historical development and organizational applications. *Management Decision, 42*(1), 126-138. doi:10.1108/00251740310495081

Hambrick, E. P., & McCord, D. M. (2010). Proactive coping and its relation to the Five-Factor Model of personality. *Individual Differences Research, 8*(2), 67-77.

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*(3), 513-524. doi:10.1037/0003-066X.44.3.513

Hochwalder, J. (2009). Burnout among Torgersen's eight personality types. *Social Behavior and Personality, 37*(4), 467-480.

Isaksson Ro, K. E., Tyssen, R., Hoffart, A., Sexton, H., Aasland, O. G., & Gude, T. (2010). A three-year cohort study of the relationships between coping, job stress and burnout after a counseling intervention for help-seeking physicians. *BMC Public Health, 10*, 213-226.

Jenaro, C., Flores, N., & Arias, B. (2007). Burnout and coping in human service practitioners. *Professional Psychology: Research & Practice, 38*(1), 80-87. doi:10.1037/0735-7028.38.1.80

Kahill, S. (1988). Symptoms of professional burnout: A review of the empirical evidence. *Canadian Psychology, 29*(3), 284-297. doi:10.1037/h0079772

Kotov, R., Gamez, W., Schmidt, F., & Watson, D. (2010). Linking "big" personality traits to anxiety, depressive, and substance abuse disorders: A meta-analysis. *Psychological Bulletin, 136*(5), 768-821.

LaPadula, M. (2003). A comprehensive look at online student support services for distance learners. *The American Journal of Distance Education, 17*(2), 119-128. doi:10.1207/S15389286AJDE1702_4

Lazarus, R. S. (1993). Coping theory and research: Past, present, and future. *Psychosomatic Medicine, 55*, 234-247.

Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality, 1*(3), 141-169. doi:10.1002/per.2410010304

Lent, J., & Schwartz, R. C. (2012). The impact of work setting, demographic characteristics, and personality factors related to burnout among professional counselors. *Journal of Mental Health Counseling, 34*(4), 355-372.

Linley, P. A., & Joseph, S. (2007). Therapy work and therapists' positive and negative well-being. *Journal of Social & Clinical Psychology, 26*(3), 385-403. doi:10.1521/jscp.2007.26.3.385

Maslach, C. (1986). Stress, burnout, and workaholism. In R. R. Kilburg, P. E. Nathan, & R. W. Thoreson (Eds.), *Professionals in Distress: Issues, Syndromes, and Solutions in Psychology* (pp. 53-75). Washington, DC: American Psychological Association.

Maslach, C. (2003). Job burnout: New directions in research and intervention. *Current Directions in Psychological Science, 12*(5), 189-192. doi:10.1111/1467-8721.01258

Maslach, C., & Jackson, S. E. (1985). The role of sex and family variables in burnout. *Sex Roles, 12*(7/8), 837-851. doi:10.1007/BF00287876

Maslach, C., Jackson, S, & Leiter, M. (1986). *Maslach Burnout Inventory Manual* (3rd ed.). Menlo Park, CA: Mind Garden, Inc.

Maslach, C., & Leiter, M. P. (2005). Reversing burnout: How to rekindle your passion for your work. *Stanford Social Innovation Review, 3*(4), 42-49.

Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology, 93*(3), 498-512. doi:10.1037/0021-9010.93.3.498

McCrae, R. R., & Costa, P. T., Jr. (1983). Joint factors in self-reports and ratings: Neuroticism, extraversion, and openness to experience. *Personality and Individual Differences, 4*, 245-255. doi:10.1016/0191-8869(83)90146-0

McIntyre, T. (1982). *Factors related to burnout: A review of research*. Houston, TX: Council for Exceptional Children International Convention. (ERIC Document Reproduction Service No. ED218908)

Meier, S. T. (1983). Toward a theory of burnout. *Human Relations, 36*(10), 899-910. doi:10.1177/001872678303601003

Moore, B. (2005). Key issues in web-based education in the human services: A review of the literature. *Journal of Technology in Human Services, 23*(1-2), 11-28. doi:10.1300/J017v23n01_02

Moos, R. H. (1990). *Coping Responses Inventory Manual*. Palo Alto, CA: Stanford University.

Morgan, B., & de Bruin, K. (2010). The relationship between the big five personality traits and burnout in South African university students. *South African Journal of Psychology, 40*(2), 182-191.

Murphy, M. J., Levant, R. F., Hall, J. E., & Glueckauf, R. L. (2007). Distance education in professional training in psychology. *Professional Psychology: Research and Practice, 38*(1), 97-103. doi:10.1037/0735-7028.38.1.97

Narumoto, J., Nakamura, K., Kitabayashi, Y., Shibata, K., Nakamae, T., & Fukui, K. (2008). Relationships among burnout, coping style and personality: Study of Japanese professional caregivers for elderly. *Psychiatry and Clinical Neurosciences, 62*(2), 174-176. doi:10.1111/j.1440-1819.2008.01751.x

Nichols, M. (2010). Student perceptions of support services and the influence of targeted interventions on retention in distance education. *Distance Education, 31*(1), 93-113.

Nicolaou, C. T., Nicolaidou, I. A., & Constantinou, C. P. (2005). The e-learning movement as a process of quality improvement in higher education. *Educational Research & Evaluation, 11*(6), 605-622.

Norman, W. T. (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. *Journal of Abnormal and Social Psychology, 66*, 574-583. doi:10.1037/h0040291

Oh, I. S., Wang, G., & Mount, M. K. (2011). Validity of observer ratings of the five-factor model of personality traits: A meta-analysis. *Journal of Applied Psychology, 96*(4), 762-773.

Parker, J. D., Endler, N. S., & Bagby, R. M. (1993). If it changes, it might be unstable: Examining the factor structure of the Ways of Coping Questionnaire. *Psychological Assessment, 5*(3), 361-368.

Pavlakis, A., & Kaitelidou, D. (2012). Burnout syndrome in students of a distance learning program: The Open University of Cyprus experience. *European Journal*

of Open, Distance and E-Learning. Retrieved from http://www.eurodl.org/materials/contrib/2012/Pavlakis_Kaitelidou.pdf.

Pidano, A. E., & Whitcomb, J. M. (2012). Training to work with children and families: Results from a survey of psychologists and doctoral students. *Training and Education in Professional Psychology, 6*(1), 8-17. doi:10.1037/a0026961

Pines, A. M. (2004). Adult attachment styles and their relationship to burnout: A preliminary, cross-cultural investigation. *Work & Stress, 18*(1), 66-80. doi:10.1080/02678370310001645025

Pines, A. M., & Aronson, E. (1981). *Career burnout*. New York, NY: Free Press.

Radey, M., & Figley, C. R. (2007). The social psychology of compassion. *Clinical Social Work Journal, 35*(3), 207-214. doi:10.1007/s10615-007-0087-3

Ramos, J. A. (2011). A comparison of perceived stress levels and coping styles of non-traditional graduate students in distance learning versus on-campus programs. *Contemporary Educational Technology, 2*(4), 282-293.

Raquepaw, J. M., & Miller, R. S. (1989). Psychotherapist burnout: A componential analysis. *Professional Psychology: Research and Practice, 20*(1), 32-36. doi:10.1037/0735-7028.20.1.32

Rupert, P. A., & Kent, J. S. (2007). Gender and work setting differences in career-sustaining behaviors and burnout among professional psychologists. *Professional Psychology: Research and Practice, 38*(1), 88-96. doi:10.1037/0735-7028.38.1.88

Rupert, P. A., & Morgan, D. J. (2005). Work setting and burnout among professional psychologists. *Professional Psychology: Research and Practice, 36*(5), 544-550. doi:10.1037/0735-7028.36.5.544

Rupert, P. A., Stevanovic, P., & Hunley, H. A. (2009). Work-family conflict and burnout among practicing psychologists. *Professional Psychology: Research and Practice, 40*(1), 54-61. doi:10.1037/a0012538

Salami, S. O. (2011). Job stress and burnout among lecturers: Personality and social support as moderators. *Asian Social Science, 7*(5), 110-121. doi:10.5539/ass.v7n5p110

Salmela-Aro, K., Kiuru, N., Leskinen, E., & Nurmi, J. E. (2009). School Burnout Inventory (SBI): Reliability and validity. *European Journal of Psychological Assessment, 25*(1), 48-57. doi:10.1027/1015-5759.25.1.48

Schaufeli, W. B., Bakker, A. B., Hoogduin, K., Schaap, C., & Kladler, A. (2001). On the clinical validity of the Maslach Burnout Inventory and the Burnout Measure. *Psychology & Health, 16*(5), 565-582. doi:10.1080/08870440108405527

Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology, 33*(5), 464-481. doi:10.1177/0022022102033005003

Smith, B. (2005). Online student support services. *Community College Journal, 76*(2), 26-29.

Soper, D. (2011). A-priori Sample Size Calculator for Multiple Regression. Retrieved from http://danielsoper.com/statcalc3/

Suls, J., Wan, C. K., Barlow, D. H., & Heimberg, R. G. (1990). The fallacy of uniqueness: Social consensus perceptions of anxiety disorder patients and community residents. *Journal of Research in Personality*, *24*(4), 415-432. doi:10.1016/0092-6566(90)90031-Z

Theorell, T., & Karasek, R. A. (1996). Current issues relating to psychosocial job strain and cardiovascular disease research. *Journal of Occupational Health Psychology, 1*(1), 9-26. doi:10.1037/1076-8998.1.1.9

Tirre, W. C. (2003). Test review of the Coping Inventory for Stressful Situations, 2nd Edition. In B. S. Plake, J. C. Impara, & R. A. Spies (Eds.), *The fifteenth mental measurements yearbook* [electronic version]. Retrieved from the Burros Institute's Mental Measurements Yearbook online database.

Tupes, E. C., & Christal, R. E. (1961). *Recurrent personality factors based on trait ratings* (USAF Publication No. ASD-TR-61-97*)*. Lackland Airforce Base, TX: USAF.

Wallace, S. L., Lee, J., & Lee, S. M. (2010). Job stress, coping strategies, and burnout among abuse-specific counselors. *Journal of Employment Counseling, 47*(3), 111-122.

Appendix A: Study Information

Thank you for your interest in my study. My name is Michelle Grigsby and I am a graduate student in Walden University's Clinical Psychology Ph.D. program seeking participants for my dissertation research regarding personality traits, coping styles, and burnout in online doctoral psychology students.

Should the findings of this study support the hypothesized moderating effect of coping styles on the relationship between personality traits and burnout symptoms, it may serve both students and universities as a rationale for implementing assessments and interventions to decrease burnout symptoms, and thereby reduce attrition rates and increase completion rates for online doctoral psychology students.

Participants are required to be enrolled in an online doctoral psychology program. If you choose to participate in this online survey, you will be asked to complete the following four surveys via Survey Monkey: the *Student Demographic Questionnaire* (*SDQ*), the *NEO Five-Factory Inventory* (*NEO-FFI-3*), the *Coping Inventory for Stressful Situations* (*CISS*), and the *Maslach Burnout Inventory – Student Survey* (*MBI-SS*). Completion time for consent and all four surveys will be approximately 30-35 minutes.

Appendix B: Informed Consent

Informed Consent:
This Informed Consent Form is provided in order for you to understand my research study so that you are able to make an educated choice as to whether or not to participate. You may print a copy for your records.

Purpose:
Thank you for your interest in my study. My name is Michelle Grigsby and I am a doctoral student in Walden University's Clinical Psychology Ph.D. program seeking participants for my dissertation research regarding personality traits, coping styles, and burnout in online doctoral psychology students.

Research Benefits:
Should the findings of this study support the hypothesized moderating effect of coping styles on the relationship between personality traits and burnout symptoms, it may serve both students and universities as a rationale for implementing assessments and interventions to decrease burnout symptoms, and thereby reduce attrition rates and increase completion rates for online doctoral psychology students.

Participant Procedures:
Participants are required to be enrolled in an online doctoral psychology program. If you choose to participate in this online survey, you will be asked to complete the following four surveys via Survey Monkey: the *Student Demographic Questionnaire* (*SDQ*), the *NEO Five-Factory Inventory* (*NEO-FFI-3*), the *Coping Inventory for Stressful Situations* (*CISS*), and the *Maslach Burnout Inventory – Student Survey* (*MBI-SS*). Completion time for consent and all four surveys will be approximately 30-35 minutes.

Voluntary:
Participation in this research study is voluntary. There will be no repercussions if you choose: not to participate in this study at the outset; to terminate your participation at any time during the process; or, to limit your participation to specific questions/responses.

Risks:
Risk of harm due to participation in this study is minimal and limited to the possibility of minor discomforts that can be encountered in daily life, such as fatigue, stress, or emotional upset.

Compensation:
There will be no compensation offered for participation in this study.

Confidentiality:
In order to protect your privacy, no signature will be required on this form. Instead your checking the "I Consent" area and completing the following surveys will signify your

consent. As the study is anonymous by nature, there will be no identifying information collected. All research data, however, will be kept confidential and secure, and will only be used for this research project.

Conflict of Interest:
Although this researcher will benefit from this study as partial fulfillment of the requirements of the Clinical Psychology Ph.D. program, she maintains no financial interest in the study.

Contacts:
If you have any questions regarding this research study or wish to have the results of this study emailed to you, please feel free to contact me at michelle.grigsby@waldenu.edu. If you wish to speak with someone regarding your rights as a participant, you may contact Dr. Leilani Endicott at Walden University, 612-612-312-1210. Walden University's approval number for this study is 06-19-14-0108410, and it expires on June 18, 2015.

Statement of Consent:
"I have read the above information and I feel that I understand the study well enough to make a decision about my involvement. By checking the box marked *I Consent* below, I understand that I am agreeing to the terms described above."

❑ I Consent ❑ I Do Not Consent

Thank you for your time and participation.

Appendix C: Student Demographic Questionnaire (SDQ)

1. Are you currently enrolled in a Ph.D. psychology program at Walden University?
   - o Yes
   - o No (please stop here)

2. Within which specialty are you completing your Ph.D. at Walden University?
   - o Clinical
   - o Counseling
   - o Educational
   - o Forensic
   - o General
   - o Health
   - o Organizational
   - o Social
   - o School

3. Please indicate how many quarters you have spent in each stage of the online doctoral psychology program at Walden University? (If you have not yet reached a particular stage, please enter "0")
   - ❑ General Courses Requirement
   - ❑ Practicum/Internship Requirement
   - ❑ Dissertation Requirement

4. How many hours per week do you spend in the following pursuits?
   - ❑ University studies or study requirements (e.g., practicum/internship hours
   - ❑ Employment in a Mental Health field
   - ❑ Employment in another field

5. How would you best describe your current relationship status?
   - o Single (including Never Married, Separated, and Divorced)
   - o Living with Partner (including Married)
   - o Widowed

6. How many children do you have living in your home (including, step-children, foster-children, or others in your care)?
   - ❑ Full-Time
   - ❑ Part-Time

7. What is your current age?
   - ❑ Age

8. What is your sex?
    - Female
    - Male

9. With which of the following ethnic/racial categories do you self-identify?
    - Decline to Answer
    - American Indian/Native Alaskan
    - Asian
    - Black/African American
    - Native Hawaiian/Pacific Islander
    - White
    - Other
    - Hispanic/Latino (please also indicate racial category(ies)

Appendix D: NEO Five-Factor Inventory, Third Edition (NEO-FFI-3)

Due to Copyright laws, the following contact information is provided for those wishing to examine the *NEO Five-Factor Inventory, 3rd edition* (*NEO-FFI-3*; Costa & McCrea, 1992) used in this study:

PAR, Inc.
16204 North Florida Avenue
Lutz, Florida 33549
USA
(800) 331-8378
www4.parinc.com

Appendix E: Coping Inventory for Stressful Situations (CISS)

Due to Copyright laws, the following contact information is provided for those wishing to examine the *Coping Inventory for Stressful Situations* (*CISS*; Endler & Parker, 1990a) used in this study:

MHS, Inc.
Post Office Box 950
North Tonawanda, New York 14120
USA
(800) 456-3003
www.mhs.com

Appendix F: Maslach Burnout Inventory—Student Survey (MBI-SS)

Due to Copyright laws, the following contact information is provided for those wishing to examine the *Maslach Burnout Inventory – Student Survey* (*MBI-SS*; Schaufeli et al., 2002) used in this study:

Mind Garden, Inc.
855 Oak Grove Avenue
Suite 215
Menlo Park, California 94025
USA
(650) 322-6300
www.mindgarden.com

Curriculum Vitae

Michelle L. Grigsby, M.A., LPC, LPA

EDUCATION

Present Doctor of Philosophy in Clinical Psychology, Walden University (in progress)
1997 Master of Arts Degree in Counseling Psychology, National University
1995 Bachelor of Arts Degree with major in Psychology, University of North Texas

ACADEMIC HONORS

2008 PsiChi - Walden University Chapter
1997 PsiChi - National University Chapter

PROFESSIONAL LICENSES & CERTIFICATES

2010 Licensed Psychological Associate, #34762 Active (Texas)
2000 Licensed Professional Counselor, #16087 Active (Texas)
1996 Bereavement Counselor Certificate (California)
1996 Crisis Intervention Specialist Certificate (California)
1996 Sexual Assault Response Team Advocate Certificate (California)

PROFESSIONAL EXPERIENCE

2000-present *Licensed Professional Counselor, Inner Sight*
Provide services to child, adolescent and adult clients through individual, couple, family and group therapy; Issues of focus include depression, anxiety, substance abuse, sexual abuse, parenting, anger management, relationships.

2008-2010 *Licensed Psychological Assistant/Intern, Stonebridge Behavioral Health*
Conducted psychometric testing and psychosocial assessments; Created psychological evaluation reports; Participated in court-related services and diagnostic consultations.

2000-2000 *Clinical Coordinator, Innovative Concepts*
Served as case manager to treatment team of contract and employed therapists who provided counseling services to clients referred by Child Protective Services, Juvenile Probation, and medical case management agencies; Supervised practicum students; Coordinated quality assurance audits.

Program Therapist, Innovative Concepts

Served as a program therapist in both office and home settings for clients referred by Child Protective Services, Juvenile Probation, and medical case management agencies, through individual, family and group therapy.

1998-2000 *Program Therapist, Roy Maas' Youth Alternatives*
Served as the program therapist for the female residential treatment center center, treating residents aged 6-19 referred by Child Protective Services and/or the Juvenile Probation Department, throughindividual, group, sibling and family therapy; Created and facilitated educational in-services for program staff; Created uniform treatment plan standards for therapeutic team.

1996-1997 *Bereavement Counselor, Grossmont Hospital/Sharp Home Health Care*
Served as a bereavement counselor to family members of hospice patients up to one year following the death of the patient, including individual, couple, family, group, child and adolescent counseling in office and home settings; Co-facilitated an adolescent grief group open to all students at Rancho Buena Vista High School.

1996-1997 *Crisis Intervention Specialist, Women's Resource Center*
Served on 15-hour shifts as a crisis intervention specialist on WRC's crisis hotline, providing referrals and screening candidates for the women and children's domestic violence shelter.

Sexual Assault Response Team Advocate, Women's Resource Center
Served on 15-hour on-call shifts as a sexual assault response team advocate, assisting S.A.R.T. nurse and police officer with assault report interview, gathering of rape-kit evidence, and providing counseling and legal referrals.

VOLUNTEER EXPERIENCE

2011-present Animal Defense League (San Antonio, Texas)
2008-2012 Girl Scouts of America (San Antonio, Texas)
2008-2009 Boy Scouts of America (San Antonio, Texas)

PROFESSIONAL MEMBERSHIPS

American Psychological Association
American Counseling Association
Texas Psychological Association
Texas Counseling Association